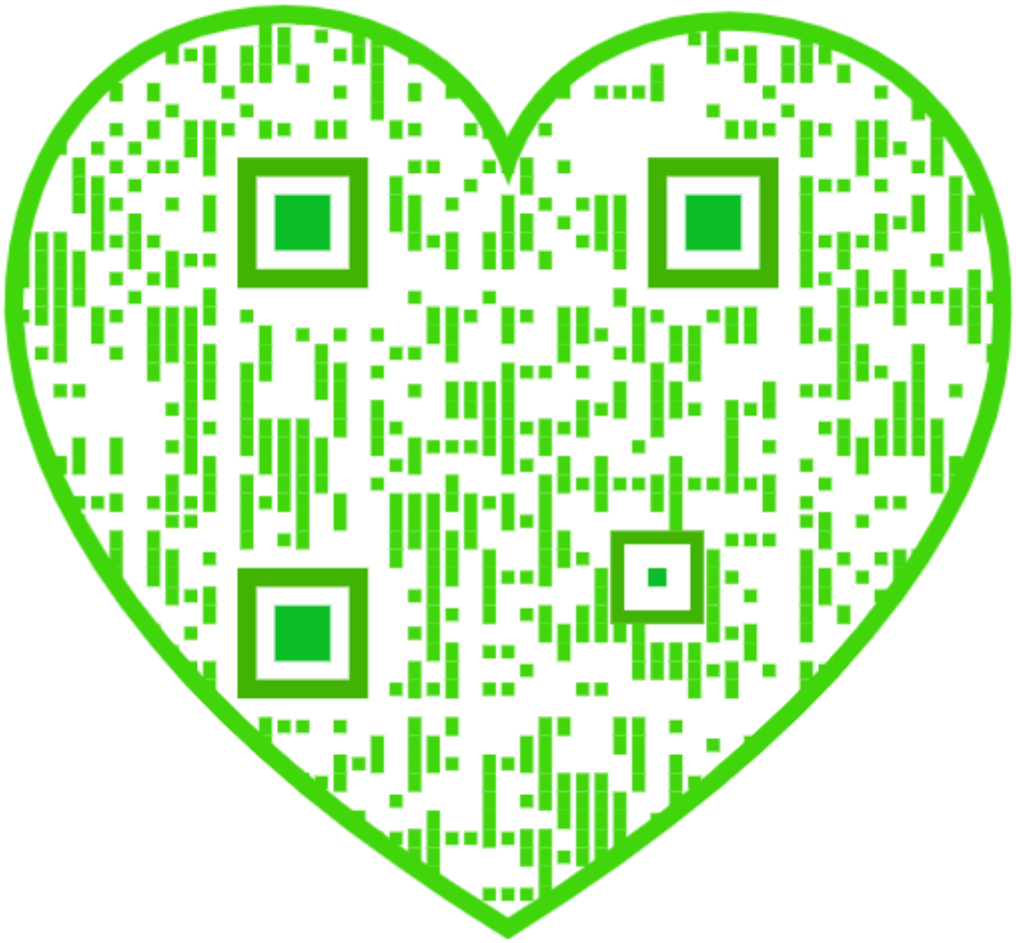

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LECTURES

ON THE

THEORY OF ECONOMICS

BY

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To

the memory of my Brother

Gilbert Henry Hicks

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PART I

PROLEGOMENA

CORRIGENDA.

P. 216, l. 18, for *induce the owner thereof to allow the use of his factor*, read *defray the expense of making the corresponding factor available.* Similar substitutions should be made on p. 223, l. 6; p. 225, l. 1; p. 243, l. 3; p. 258, l. 2; and p. 271, l. 11.

P. 233, l. 23, for *track* read *tract.*

P. 260, l. 9, for *situation is sufficient to induce the possessor of enterprise*, read *enterprise is sufficient to induce the possessor thereof.*

1

ECONOMICS

1. The science of economics grew out of the attempt to formulate precepts for the guidance of the State in its relation to business, a fact reflected in the name "political economy," which has so long been used to designate the subject. It was found that the formulation of such precepts requires a knowledge of the wider field of general business activity. Accordingly, the domain of the economist came to be considered co-extensive with the entire range of business operations; and, since in business men seek wealth, the science was defined as "that

Keynes, *The Scope and Method of Political Economy;* Cairnes, *The Character and Logical Method of Political Economy*, 2d. ed., lectures i–vi.; Cossa, *An Introduction to the Study of Political Economy*, trans. by Louis Dyer, Theoretical Part; Walker, *Political Economy*, 3d. ed., Part I.; Hadley, *Economics*, chap. i.; Pantaleoni, *Pure Economics*, trans. by T. B. Bruce, Part I, chap. i.; Marshall, *Principles of Economics*, 2d. ed., Vol. I., Bk. 1.; Gide, *Political Economy*, trans. by E. P. Jacobsen, pp. 1–14; Ely, *Outlines of Economics*, Bk. I., chapters x., xi.; Roscher, *Principles of Political Economy*, trans. by John J. Lalor, Vol. I., §§ 11–21.

body of knowledge which relates to wealth."[1] But there is something even more fundamental to economics than wealth. Back of wealth, which is the immediate object of man's efforts, are the efforts themselves and the purpose for which they are put forth, *i. e.*, the satisfaction of wants. Here is the fundamental fact in economics. Man is a creature of wants, which lead him to act that he may satisfy them. This should form the starting-point in the consideration of the phenomena that are commonly designated industrial or economic. It is the function of the economist to investigate the process through which men seek to secure the satisfaction of their wants, to the end that the principles involved may be discovered and explained. Economics, then, may be defined as the science that treats of human activity in its relation to the pursuit of the satisfaction of wants.

2. In this view of the nature of economics, the scope of the subject embraces all human activity, for every act has a want-satisfying phase, *i. e.*, every act is concerned with the process of satisfying wants, for every act has a want as its immediate cause. It is true that in some acts the want-satisfying phase is more apparent than in others, and those that show their economic character most prominently are usually selected as the material for investigation, for from such acts the principles of the economic process may most readily and certainly

[1] Francis A. Walker, *Political Economy*, 3d ed., p. 8.

be discovered. Thus the activity of the carpenter, the farmer, the merchant, the manufacturer and others engaged in similar pursuits, is manifestly directed to the satisfaction of wants. No one questions that such activity is economic, and it is with activity of this sort that economic investigation is chiefly concerned.

It is, however, a mistake to suppose that only such acts as those mentioned possess an economic character. The activity of the philanthropist, the clergyman, the sister of mercy and others of like occupation, has an economic character as truly, if not as apparently, as the activity of the carpenter, the farmer, the merchant or the manufacturer, for the activity of the former callings proceeds from wants whose satisfaction is sought, as truly as does that of the latter. There may be, and doubtless are, wide differences between the two sorts of activity, but these differences lie, not in the fact that one is economic and the other is not, but rather in the character of the wants that give rise to the activity.

3. The purpose of economic science, then, is to interpret the general truths of human activity in its relation to the pursuit of want-satisfaction. As such, it is not directly and immediately concerned with the formulation of precepts or rules of conduct. This should be clearly understood. Otherwise the proper limits of the subject will not be recognized, and the true relation of economics to the problems of society will not be appreciated.

Injury has often resulted to the science and also to the cause of social advancement through failure to understand just what is to be expected of the subject. Two facts need emphasis in this connection: (1) since economic theory is concerned with the principles that control in one of the most important phases of human activity, its conclusions, when valid, are indispensable to the solution of social problems; (2) on the other hand, since economic theory treats of but one of the phases of human activity, it does not alone suffice for the solution of those problems.

The attempt to prescribe for social ills without a knowledge of economic principles resembles the attempt of a physician to cure disease without a knowledge of the principles of materia medica or of some other branch of the science of medicine. By chance, he may apply the proper remedy, but the probability is that he will not, and that, if recovery follows his treatment, it will be due to the fact that the patient's constitution is able to withstand both the disease and the medicine. The much heralded panaceas for physical ills have their counterpart in many of the remedies proposed for social ills. Still, the presence of quacks does not discredit the real science of medicine in the opinion of thoughtful people, nor should the existence of social quacks discredit the essential truths of economics and the other social sciences or discourage the search for those truths.

But, however important economic principles may be, since their scope does not include all phases of

human activity, they constitute but part of the equipment necessary to the solution of social problems. In addition to these, such equipment requires a knowledge of the principles of moral obligation and of the nature and working of the will of society through the state. These three, economics, ethics and politics, considered as subjects which are concerned with the underlying principles of human activity in their respective fields, supply the essential truths upon which sound social policies rest. The policy that is constructed in disregard of any one of them, must of necessity be ill-balanced and inadequate.

4. The fact that economic theory is necessary to but not alone sufficient for the solution of social problems, has not always been recognized even by economists themselves. Too much has sometimes been claimed for economic theory, and when the expectations aroused have failed of realization, there have followed criticism and even denial of the value of the science. Two of these criticisms deserve especial notice. Economics, in common with other subjects whose province is the discovery and interpretation of general principles, has been condemned on the ground of a supposed fundamental inconsistency between theory and practice. And, again, the theory of economics has been subjected to the special criticism that its conclusions, if carried out, would be destructive of the welfare of society, since they disregard man's higher nature in their emphasis of his selfish impulses.

So far as the charge of an inconsistency between theory and practice is concerned in general, it is sufficient to say that this view rests upon a mistaken conception of theory. Where such inconsistency really exists, it is not due to a fundamental lack of harmony between theory and practice, but to the shortcomings of the particular theory in question. Theory is nothing more than the interpretation of practice. There can, therefore, be no real inconsistency between a correct theory and practice.

But of this criticism as urged against economic theory in particular, something more needs to be said. The objection in this connection has been directed mainly against the so-called orthodox or *doctrinaire* economics as set forth by the English writers, and the principal occasion for the criticism is the failure of the doctrine of *laissez-faire* or non-interference by government in business affairs, to meet the requirements of actual life. It should be said in passing that a careful reading of the leading representatives of the English school of economists fails to reveal any such hard and fast advocacy of *laissez-faire* as might be expected from the statements of some of their critics.[1] But, admitting this, it remains true, doubtless, that some among the English writers show a tendency to restrict unduly the sphere of governmental activity and to overestimate the importance of governmental non-

[1] Cf. John Stuart Mill, *Principles of Political Economy*, Vol. II., pp. 558, et. seq.

interference. One of the principal reasons for this attitude is found in the view entertained by those writers as to the part played by competition in the economic process, a fact that illustrates admirably the dangers of building theory upon inadequate hypotheses.

Free competition is probably the most fundamental of the hypotheses upon which English economic theory rests.[1] Nor, indeed, is this view limited to English theory alone. In the prevailing treatment of the subject, the existence of competition that is "full and free" is repeatedly set forth as a necessary condition for the validity of the conclusions drawn. It is not surprising that such theory should prove inadequate as an interpretation of actual life.

From a scientific standpoint, there is no objection to the formulation of a theory of human activity as it would be under a régime of free competition, provided, of course, the reasoning remains consistent with that hypothesis. But a serious error follows when, without further qualification, the argument proceeds as though that which was assumed for the purpose of reasoning, corresponds with what exists in a normal society. This is exactly what much

[1] "Before commencing the inquiry into the laws of value and price, I have one further observation to make. I must give warning, once for all, that the cases I contemplate are those in which values and prices are determined by competition alone."—J. S. Mill, *Principles of Political Economy*, Vol. I., p. 540.

of the current economic theory does. Starting with free competition as its fundamental hypothesis, it soon passes to the assumption, not only that such a condition is possible, but that it is the only normal and, therefore, the only healthy manifestation of economic activity. It is but a step from this conclusion, to the inference that the economic ills of society are to be remedied by procuring the universal sway of free competition, an opinion which is widely prevalent. Such a theory is wholly irreconcilable with practice, for a condition of absolutely free competition does not and, as will be shown later, by the very nature of things cannot exist.[1]

It is, then, doubtless true that the tenets of the English economists need revision in the light of later development and research. Such a result is entirely in accord with the evolutionary character of society. As time passes new conditions appear which call for interpretation and new light is thrown upon the fundamental principles of development themselves. This, however, is far from justifying the tendency that is shown by some to discard alto-

[1] The criticism here made receives additional emphasis when, as not infrequently happens, even those who profess to rest their theory upon free competition, as a matter of fact do not, but proceed to limit the sway of competition arbitrarily as occasion requires. Moreover, in view of the important place given to competition in economic theory, it is a significant fact that one will search in vain in the various expositions of competitive economics for a comprehensive description of what free competition really involves.

gether the conclusions of English economics, and to construct the science anew. The attempt to do so has failed to produce anything of lasting value. A wiser course is to reëxamine the hypotheses upon which that body of doctrine rests, with a view to a restatement of its principles where necessary. It may safely be affirmed that the teachings of Adam Smith, David Ricardo and John Stuart Mill supply, in the main, the foundation upon which any permament addition to economic science will rest.

5. The criticism passed upon economic theory that it inculcates selfishness, may be traced in part, at least, to the treatment of the economic process as though it were a distinct and wholly independent part of life. For, if a portion of men's acts are purely economic, it would seem to follow that, in directing such acts, only economic principles, *i. e.*, such as are concerned immediately with want-satisfaction, need be considered. Here, too, it must be admitted there is much in the attitude of economists to warrant such a conclusion. When to this is added a narrow interpretation of want-satisfaction, which conceives it to be wholly selfish, the "dismal science" view of economics appears to be established. This criticism has exerted a marked influence upon the recent trend of economic thought, including much that is professedly concerned with fundamental principles only. The attempt has been made to meet the difficulty by discarding the orthodox economics and substituting therefor a new system leavened with a modicum of ethics. Such a course

is apt to result in poor ethics and poorer economics. A remedy of that sort is inadequate, because it does not touch the fundamental difficulty. It is the criticism that is here at fault; it fails to recognize the true scope and purpose of the science of economics.

Economics, as a science, is concerned with what *is*, not with what *ought* to be. These are distinct inquiries. The question of *ought* arises as soon as the attempt is made to formulate a policy for society or for individuals in society. To be sure, the determination of what ought to be done to promote human welfare is the ultimate end of all serious study of social conditions. But the question of *ought* can not be determined satisfactorily without a knowledge of what *is*. This economics aims to ascertain in so far as the want-satisfying phase of activity is concerned. But the process of attaining want-satisfaction is not a separate and distinct sphere of life. Acts can not be sorted into distinct classes on the basis of their economic or non-economic character. As has been pointed out, economics treats of a phase of activity. It should not be difficult to recognize that the search for the principles which actually prevail in the effort of men to satisfy their wants, is far from identical with teaching that men ought to be concerned with their own welfare alone.

Furthermore, the fact that every act arises from a want whose satisfaction it seeks, does not brand all action as selfish in the ordinary meaning of that term. Whether an act is selfish or not depends

upon the kind of want that is back of it and the way in which its satisfaction is sought. Want-satisfaction is not necessarily selfish. Nor does the fact that economics considers action regardless of its selfish or unselfish character, signify that the science approves as right, conduct that is immoral. The man who takes advantage of another in a business transaction and then attempts to justify the proceeding on the ground that it is "business," has but a distorted notion of the relation of business and ethics. The science of physics is not condemned as immoral because in accordance with physical laws, a man falling from the tenth story of a building upon a stone pavement is killed, nor is the science of chemistry held responsible for the aid that the would-be murderer derives from the chemical properties of arsenic. In following his good impulses and his evil impulses, man seeks the satisfaction of his wants; so far as the science of economics is concerned, its scope is limited to an investigation of the general principles involved therein.

6. Economics is a social science because it is concerned with human activity and human activity is social. Though, under some circumstances, men's acts may seem to be purely individual, a closer view shows that they are never devoid of social character. Man himself is by nature social and cannot, if he will, escape the consequences of that fact. Hence, all of his activity is social activity in the sense that it is conditioned by society and that it in turn exerts an influence upon society.

As a social science, economics is closely related to certain other subjects which treat of social phenomena. First among the social sciences is sociology, which, as defined by Professor Giddings, is "the science of social elements and first principles."[1] Following this is a group of subjects whose common starting-point is man's activity as a member of society. Fundamental in this group are the three subjects already referred to: economics, ethics and politics, treating respectively of activity in its relation to want-satisfaction, of moral obligations and of the nature and manifestation of the social will through the state. In a manner growing out of these are other related subjects, such as jurisprudence, which treats of the social will as manifested in law; finance, the theory of the support of the state; administration, which investigates the methods of carrying out the will of the state; and others.

7. With the subjects mentioned, two others, history and statistics, are often correlated. The domain of history is most comprehensive. In its broadest sense, it is nothing less than the record of the past. Restricted to society, it is the record of human development in all its phases. The philosophy of history is the theory of the progress of society. No investigation that seeks to understand the present condition of society and to provide for its future can be adequate if it disregards the facts

[1] *The Principles of Sociology*, p. 33.

of social evolution. It is preëminently the province of history to interpret the development through which society has attained its present condition.

Formerly there was a tendency to limit the scope of history to the political phase of social growth, but the view that "history is past politics and politics present history" can be accepted, if at all, only in a very general sense. For as the truths of evolution have broadened the conception of human progress, it has come to be recognized that history belongs not to one phase of that development alone but to all phases. And from constituting a single and restricted field of investigation, history has come to be regarded as an essential feature of every department of social science.

The science of statistics has grown out of a need for better methods of investigation. Theories based upon hypotheses evolved from the limited experience of one or of a few individuals have proven inadequate. The recognition of this fact led to a movement for the collection and systematization of data on a large scale, and out of this has developed a new subject, statistics, which is essentially a science of method of investigation. It is described by Professor Meitzen as "the method of judging of collective phenomena from the results of enumeration."[1]

[1] *The History, Theory and Technique of Statistics*, trans. by Roland P. Falkner. Supplement to the Annals of the American Academy of Political and Social Science, May 1891, p. 107.

8. Varying opinions are entertained as to the validity of the claim of economics to be considered a science. The controversy is of importance only as it may help to give a clear understanding of the nature of the subject. The differences of opinion result largely from different views as to what constitutes a science. If the distinguishing characteristic of a science lies in the absolute and fixed nature of the phenomena with which it deals, economics is not a science. According to this standard, moreover, no subject that treats of man, whether concerned with his physical or mental nature, is a science. Indeed, this standard would exclude from the list of sciences all subjects that deal with life in any of its manifestations, including botany and zoölogy.

A second criterion that may be taken for judging whether a subject is entitled to be called a science is the exact character of the results obtained. According to this standard, also, economics is not a science. But if absolute exactness be insisted upon, it is doubtful whether any subject except mathematics can be called a science. Chemistry, physics and all subjects that involve measurement have their "probable error."

A third feature that may be regarded as distinguishing a science is the character of the subject as explaining homogeneous phenomena by the interpretation of their general truths. It is upon this basis that most of the so-called sciences rest their title to be thus designated. And according to this

standard, economics is properly included among the sciences.

But whether, in the last analysis, economics is considered to be a science or not, scientific methods are indispensable to the discovery and interpretation of the general truths in the phenomena with which the subject deals. Discriminating definitions are eminently desirable and logical consistency is essential. Much of the objection to the recognition of economics as a science is due, not to the nature of its phenomena, but to the unscientific methods of its exponents. And whether the attainment of exact results is possible or not, nothing can justify the failure to seek the highest degree of exactness that can be obtained.

2

FUNDAMENTAL CONCEPTS

Fundamental to the science of economics are four concepts, designated respectively, want, wealth, value and price. For the discussion of the principles of economics, it is especially desirable, at the outset, to formulate clear definitions of these concepts. Adequate definitions are indispensable to any scientific discussion, but their importance in economics is enhanced by the fact that the terms

Clark, *Philosophy of Wealth*, chapters i., v.; *The Distribution of Wealth*, chapter xxiv.; Pantaleoni, *Pure Economics*, trans., Part I., chapters ii.–v., Part II., chapter i., §§ 1, 2; Von Wieser, *Natural Value*, trans. by C. A. Malloch, Books I., II.; Walker, *Political Economy*, §§ 4–15, 114–118; Böhm-Bawerk, *The Positive Theory of Capital*, trans. by William Smart, Bk. III., chapters i., ii.; Marshall, *Principles of Economics*, Bk. II., chapter ii.; Mill, *Principles of Political Economy*, Preliminary Remarks, Bk. III., chapters i., xv.; Sidgwick, *The Principles of Political Economy*, Bk. I., chapters ii., iii.; Gide, *Political Economy*, trans., Bk. I.; Roscher, *Political Economy*, trans., §§ 1–10, 100; Ely, *Outlines of Economics*, pp. 89–93, 119–126, 141; Jevons, *The Theory of Political Economy*, pp. 40–90; Laughlin, *Elements of Political Economy*, chapters i., vii.

here employed are in common use without the careful distinctions essential to scientific analysis.

9. An economic want is a desire that leads to activity. As has already been pointed out, the fundamental fact in economics is that every man is a creature of wants whose satisfaction he seeks. A man is hungry and wants food; he is cold and wants clothing and shelter; he possesses the capacity for knowing and wants instruction; he appreciates the beautiful and wants paintings and statuary; he is religious and wants the facilities for worship. Indeed the scope of this economic phenomenon is as broad and comprehensive as human activity itself. And since economics is the theory of human activity in its relation to want-satisfaction, wants, economically considered, are not limited to desires for material things, nor are the so-called ethical or philanthropic desires excluded. But these and all others that influence activity are properly classed among economic phenomena.

In considering the relation of wants to activity, it is necessary to distinguish between general wants, which are more or less intense but indefinite longings for things that may or may not exist, such as a general want for food, clothing or pictures; and specific wants, which are directed towards particular objects, such as a want for definite articles of food, clothing or pictures that actually exist. The importance of this distinction lies especially in the close relation sustained by specific wants to wealth and value.

10. In the effort to attain the satisfaction of wants, specific things become the objects of wants. Thus, in seeking to satisfy hunger, commodities such as wheat, apples, sheep and others become wanted. These things constitute wealth, which consists of whatever exists and is the object of a want. When a thing becomes the object of a want, it may be said to possess the power of want-attraction, by which is meant merely that the thing attracts to itself a human want. Wealth, then, may be defined to consist of whatever possesses the power of want-attraction.[1] Broad as this definition may seem, it is not essentially different from the popular conception of wealth. Houses and lands, wheat and corn, cattle and sheep, pictures and statuary,—whatever in business intercourse is considered to be wealth, owes its designation as such to the fact that it is wanted. Some things that are wanted, it is true, are commonly excluded from the category of wealth. But when the reasons

[1] Every one who has discussed this subject has felt the need of a satisfactory term by which to designate that which constitutes the distinguishing characteristic of wealth. Though the idea itself is not difficult to comprehend, it is difficult to describe in a few words. The term "utility," commonly employed, results in confusion, because there is associated with it in the popular mind certain ideas, such as beneficial, that are not necessarily connected with wealth. The expression, "power of want-attraction," is by no means free from objection, but its use in explaining the subject to students has shown that it conveys the desired information even though it is somewhat cumbersome.

for such exclusion are ascertained, they are found to lie in the exigencies of the practical conduct of affairs; they are not valid for scientific purposes. Thus the popular view excludes from wealth those things whose power to attract wants is so small as to be "practically nothing." This suits the requirements of business, but it does not suffice for economic science. As, in seeking mathematical truths, the infinitesimal can not be ignored, so, in seeking economic truths, the indefinitely small must not be discarded arbitrarily.

11. For the existence of want-attracting power, and, therefore, of wealth, two conditions are essential: (1) there must exist a want, and (2) there must exist something that is the object of that want.

Supply or the mere existence of commodities is not of itself sufficient to result in power of want-attraction, for that power is not something that might exist *if* wants existed; it is something that actually does exist. A thing is not wealth simply because it might be wanted. For example, at one time cotton-seed, with the exception of the comparatively small amount that was required for planting, possessed no power to attract wants. Indeed, its presence diminished that power, because it was a hindrance to the utilization of the fiber. The necessity of separating it from the fiber and of disposing of it involved additional expense. But to-day this is changed, and the power of cotton-seed to attract wants is great. Why? Not be-

cause cotton-seed has changed in its physical character, but because wants for it have developed. Cotton-seed oil and cotton-seed cake are in great demand.

On the other hand, it is equally true that a want alone is not sufficient for the existence of want-attracting power. A want is merely an abstraction until it is directed toward some object. Men want food, but that does not signify that the power of want-attraction exists. The lonely wanderer in the desert on the verge of starvation wants food most intensely, but if there is no food, his want does not result in the existence of want-attracting power. True, a general want may lead to activity for its satisfaction and thereby occasion the production of a supply possessing want-attracting power, but this power actually exists only when the want and the thing come into relation with each other. It is not want for something in general, but want for some specific commodity that results in the power of want-attraction, and, therefore, in wealth.

Furthermore, it should be observed in this connection, both that want for some specific commodity is necessary to the existence of wealth and that when want for some specific commodity exists, there is wealth. It may be that after the thing that was wanted is obtained and its true character ascertained, the want for it will cease. Then its power to attract want ceases, and with it its character as wealth. In other words, the possession of want-attracting power by any thing does not involve

the actual usefulness of the thing for the purpose for which it is wanted. Whether ultimately adapted to one's needs or not, the fact that a thing exists and is wanted, is sufficient that for the time being want-attracting power, and, therefore, wealth should exist.

12. The power of want-attraction must not be identified with physical properties, though its existence may, in a sense, be due to such properties, *i. e.*, it may be because of its physical properties that a thing is wanted. But the power of want-attraction is not a physical property. Woolen garments are able to give warmth, and possess the power to attract wants where warmth is desired. But this power to attract wants is not the physical property of the garment. If it were, the want-attracting power of the woolen garment would remain the same so long as its physical character remained unchanged. But it is evident that this is not the case, for the power of woolen garments to attract wants is greater in cold than in warm climates; to those who know their capacity to warm than among those who are ignorant of it.

It follows, too, from the nature of wealth, that it is not limited to tangible things. It includes the music of the singer as well as the piano of the manufacturer, for the former as well as the latter may possess the power of attracting wants.

13. It is sometimes said that for a thing to be wealth it must be appropriable. It is undoubtedly true that if a thing is to continue to constitute

wealth it must be appropriable, in that it must be capable of serving the purpose for which it is wanted. Otherwise it will cease to be wanted and in that event it ceases to be wealth. Thus a sunken ship may be wanted until it is found that it can not be raised, after which there may be no want for it in the economic sense, *i. e.*, no want that leads to activity, in which case it ceases to be wealth. But appropriability, as the term is commonly employed, is a characteristic or property rather than of wealth. Property involves ownership and implies the ability of the thing to be appropriated by an owner. It is a legal concept. A thing may be wealth, because the object of a want, even though legal ownership in it is impossible.

14. The association of the ideas of wealth and property led to the view, at one time prevalent, that wealth consists chiefly in money, *i. e.*, in an instrument which enables its possessor to obtain property in commodities. But the wealth of society is not necessarily increased by an increase in money, nor by an increase in such things as bonds, mortgages and other similar instruments of exchange and evidences of ownership. For it is evident that if every individual in society were to execute to another individual a mortgage, the wealth of society would not be increased by the amount of these mortgages. And, if the government were to start its printing presses and turn out an unlimited quantity of paper money in denominations of dollars, the wealth of the country

would not be increased by that number of dollars, each having the present value of a dollar. The reason for this lies in the fact that there would be little or no want for such mortgages and such dollars.

The recognition of the fact that the mere increase in money, mortgages and similar commodities does not necessarily increase the wealth of society, has led to another view which goes to the opposite extreme and denies to these the character of wealth. There is here a failure to distinguish between the existence of wealth and the amount of wealth. It does not follow that, because under certain conditions an increase in instruments of exchange and evidences of ownership does not increase the wealth of society, these things never constitute wealth. If society were to proceed to make its entire supply of iron into saws, the wealth of society would not be increased proportionately. Indeed, it is quite conceivable that a point would be reached where an increase in saws would actually decrease the supply of wealth, the number being so far in excess of the want therefor that the saws would be worth less than the raw materials used in making them. Saws are wealth only in so far as they possess the power to attract wants. In like manner, in so far as money and mortgages possess the power to attract wants, they are as truly wealth as the tool which, by facilitating the cultivation of the soil, assists in the production of food, or the machine which, by sawing lumber, increases the power of wood to

attract wants. A society without instruments of exchange would have less wealth than a society which possessed them.

15. In investigating the process of pursuing the satisfaction of wants, it becomes necessary to determine quantitative conditions. This gives rise to questions of value, for value is the amount of the power of want-attraction possessed by any commodity. Value is the quantity of that characteristic which constitutes a thing wealth. Wealth, power of want-attraction and value are related as thing, characteristic and amount of that characteristic, so that value is inseparable from wealth and wealth is inseparable from value.

16. Many wants are common to more than one member of society, from which it follows that the objects of wants are often sought by different individuals. Moreover, wants differ in degree of intensity. Two persons may possess commodities of such a character that each will prefer what the other has to that which he himself has. In such an event, the two persons will probably exchange their commodities, for, other things being equal, every man seeks that which has for him the greatest power of want-attraction. Hence, many commodities have what is called "power-in-exchange," *i. e.*, they have the power to secure for their possessor other commodities in exhange for them. But "power-in-exchange" is not essential to value; that is to say, it is not necessary that two persons should want a commodity in order that value should exist.

A thing does not cease to have value, simply because it comes into the possession of the only person that wants it and thereby ceases to have "power-in-exchange," for it does not cease to have value so long as it has the power to attract a want. On the contrary, it is want-attracting power which gives "power-in-exchange," for all things that possess "power-in-exchange" have want-attracting power, as is evidenced by the mere fact of exchange, which implies that the thing exchanged is wanted. Value, then, does not depend upon "power-in-exchange," but "power-in-exchange" depends upon value.

17. Some things are commonly said to have a large amount of power to attract wants but no value, because, though of great usefulness, they are so plentiful. Thus, air, light, water and other commodities of like character are said to possess no value (except under special circumstances when they may be scarce and difficult to obtain) though their power to attract wants is very great. Accordingly, it is held that scarcity is essential to value. But scarcity is a purely relative matter and influences the degree of want-attracting power possessed by a commodity, not the existence of that power. A thing may have more or less value because it is more or less scarce, but the existence of value depends upon the existence of want-attracting power, not upon scarcity.

To say that water has no value though its want-attracting power is great, involves, from an eco-

nomic standpoint, two errors. In the first place, it misconceives what the power of want-attraction really is. When water is said to have a large amount of power to attract wants, it is meant that water is very beneficial. But want-attracting power and power to benefit are not identical, unless it be held that a man is benefited by whatever will attract his wants, a proposition to which few will agree. A thing might possess much want-attracting power with but little or no capacity to benefit, because it might be wanted very much despite its comparative uselessness; and, *vice versa*, a thing might possess but little want-attracting power with much capacity to benefit, because, though capable of doing much good, little want for it existed.

Again, when it is said that water has much power to attact wants, the supply of water in general is thought of, and when it is said that water has no value, a small portion of the supply is thought of. There is here a confusion of general and specific wants. In the case of any given amount of water, as for example a given cupful, its value may be very small, but its want-attracting power is also, in that case, very small, *i. e.*, the want for that cupful is small.

On the other hand, to deny that value exists in such a case, because the amount is insignificant for practical purposes, leads to some remarkable conclusions from the scientific point of view. Thus, according to that theory, a grain of wheat has no

value, but a large number of grains, enough, say, to make a bushel, have value. Yet the bushel of wheat is only the sum of the number of grains which compose it. This method of reasoning finds something by adding together a limited number of nothings and is invalid in economics as well as in mathematics. If air, light, water and similar commodities possess want-attracting power, they must have value, because value is merely the amount of such power and there must be some amount where the power exists.

18. The amount of want-attracting power possessed by a commodity at any time, *i. e.*, the value of the commodity, is found by measuring that value. Value when measured is expressed in terms of the measure or unit of comparison, and this expression is price. Price, then, may be defined as value expressed in terms of a measure. Though there is nothing abstruse or difficult of comprehension about the nature of value and price and their relation to each other, no other concepts in economics are more often misunderstood, few are used with so little attempt at accurate distinction and none is a more prolific source of error. Their importance to economic discussion rather than any exceptional difficulty in comprehending them, necessitates their consideration in greater detail.

To understand price and to appreciate its significance, one must understand the process of measuring value, for it is by measuring value that price is found. This, in turn, requires a knowledge (1) of

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what it means to measure and (2) of what it is that is to be measured.[1]

19. To measure is to compare quantities. The operation involves the selection of a unit or measure and the comparison of the thing to be measured with the measure. The selection of a measure[2] consists in choosing a definite amount of some specific thing possessing the quality or property that is to be measured. This selection of a measure is purely a matter of choice, except only that the thing selected must possess the quality or property that is to be measured, *i. e.*, a measure of length must have length, a measure of weight must have weight, and a measure of value must have value. Having selected a measure, the remainder of the process of measuring consists in determining the quantitative relation between the measure and the thing to be measured. Take for example the process of measuring length. As a first step, a definite amount of something having length is selected as a unit or measure. Convenience will dictate that the measure be neither too long nor too short, but all that can be said to be absolutely essential to

[1] Measuring value is one of the most common phenomena in the economic process. Whenever an exchange is made or, indeed, whenever one thing is preferred to another, value is measured. But notwithstanding the frequency of the operation and its importance, it is one of the least comprehended of all phases of economics, and misconceptions concerning it are responsible for a multitude of fallacies.

[2] The popular term "measure" is employed in the main in this discussion instead of the scientific term "unit."

the measure is that it should have length. The amount selected is purely a matter of choice. To facilitate measuring, society adopts standards for general use, which are designated by some special name, such as, in the case of measures of length, a "foot," a "yard," or a "metre." But the measure used in any instance may be some convenient length adopted for the occasion, as when a gardener, desiring to make the sides of a bed equal, takes as his unit or measure a certain distance on his hoe handle. Even where society adopts standard measures, it remains true that the size of those measures in the first instance was purely a matter of choice. And though the existence of such standards may be eminently desirable for social intercourse, and though they are so commonly used that one seldom thinks of their having been selected arbitrarily, still, as a matter of fact, they are in no way an absolutely indispensable requisite to the process of measuring.

Having settled upon the measure of length to be used, a comparison is made between it and the thing to be measured in order to determine the quantitative relation between the lengths of the two objects. The result of the comparison is a ratio. It is found that the length of the thing measured bears a certain relation to the length of the measure. Thus, if a foot is the measure, and the result shows that the object measured, say for example a board, is twenty feet long, this means that the length of the board is twenty times the length of that which is called a foot.

The result of the measurement will be more or less precise, according to the invariabilty of the measure and the care exercised in making the comparison. Thus one may pace a field to determine its length, and since a pace is subject to variation in length, the result will give but an approximately precise idea as to the length of the field. Or, in measuring with a yard-stick, the operation may be carelessly performed, with but an approximate result. Still, these comparisons are measurements regardless of their precision. To measure is to compare quantities, and all quantitative comparisons are measurements.

20. The second requisite for an understanding of the process of measuring value is a clear comprehension of what it is that is to be measured. The nature of value has already been described, but its essential characteristics may well be emphasized anew in this connection. The value of a commodity is the amount of its power to attract wants, or, if being wanted may be called a property of a commodity, the value of a commodity is the amount of its property of being wanted, just as the length of anything is the amount of its property of extension. In measuring value, a comparison is instituted between two commodities to determine the relative degrees of intensity with which they are wanted, *i. e.*, how the amount of the want-attracting power of one compares with the amount of the want-attracting power of the other.

To illustrate, suppose it is desired to measure the value of a horse. First, something possessing

want-attracting power is arbitrarily selected as a unit or measure. This measure may be anything having value. Some things are more convenient than others for use as measures of value, but the possession of value, *i. e.*, of some power of want-attraction, is the only absolutely indispensable requisite of a measure of value. The measure selected in this instance may be a sheep. A comparison is then made between the want-attracting power of the horse and of the sheep. As a result, it may be found that the want for the horse equals the want for 50 sheep. Then the value of the horse has been measured and found to be equal to the value of 50 sheep. Here, then, is price. The price of the horse is 50 sheep. This is the value of the horse expressed in terms of the measure, sheep. Or, the measure adopted may be a definite quantity of some metal, say 23.22 grains of gold. A comparison may show that the want for the horse equals the want for 2,322 grains of gold. The value of the horse then equals the value of 2,322 grains of gold. The price of the horse is 2,322 grains of gold.[1]

[1] In ordinary business intercourse, the terms "value" and "price" are often used interchangeably, as when one asks, "what is the value of a horse" or "what is the price of a horse," but in scientific discussion the distinction between the two concepts should be carefully observed. Thus in the above illustration, it would commonly be said that the value of the horse is 2,322 grains of gold, but accurately speaking, it should be said that the value of the horse is *equal to* the value of 2,322 grains of gold, or that the *price* of the horse is 2,322 grains of gold.

As in the case of length and weight certain amounts are selected as measures and called a foot, a pound, etc., so in the case of value, that which is selected as a unit or measure may be designated by some special name, such as a dollar, a pound or a franc. Thus the measure selected may be 23.22 grains of gold and this may be called a dollar. Then, in the case of the horse above mentioned, it would be said that the price of the horse is 100 dollars, but this is only another way of saying that the want for the horse equals the want for 100 of those things which are called dollars.

Nor is the correctness of this in any wise affected by the fact that no two persons may agree that the value of the horse is equal to the value of fifty sheep or of 2,322 grains of gold or of whatever may be taken as the measure. This would mean merely that in no two persons was the relative intensity of the want for the horse and for the sheep the same. Herein lies the chief difference between measuring such properties as length and weight and measuring value. In the former, the property measured is constant or nearly so; in the latter, it is variable. The length of a given field is the same at all times; the same is true of the length of a given foot. But the value of a horse is variable, and so also is the value of whatever may be selected as the measure of value. This fact has important consequences, but it should not be allowed to obscure the fact that whether length, weight or value is considered, the process of measuring is the same,

in that in all cases measuring is comparing amounts of similar qualities, and that whenever such comparisons are made they are measurements.

21. All measurements give a two-fold result. To compare one thing with another, involves comparing the other with the one. Thus, if a room is measured and found to be twenty feet long, it follows that a foot is one-twentieth the length of the room. So in the case of the horse, if its value equals the value of fifty sheep, it follows that the value of a sheep equals one-fiftieth the value of the horse. The price of the horse is fifty sheep; the price of a sheep is one-fiftieth of the horse. Hence two prices result from all measurements of value. This fact is obscured in ordinary business transactions by the custom of selecting definite quantities of one or more commodities, usually metals, as standards by which to measure values, and the designation of these measures by some special name not suggestive of the object itself. But it is evident that, if the measure is 23.22 grains of gold, called a dollar, it follows that when the price of twenty pounds of sugar is a dollar, the price of a dollar, or of 23.22 grains of gold, is twenty pounds of sugar.

Price, then, is the value of a commodity expressed in terms of some other commodity with which it is compared to determine the quantitative relation of the values of the two commodities. In other words, price is value expressed in terms of a measure.

3

THE LAW OF VALUE

22. The basis of value is power of want-attraction. By basis of value is meant that upon which value depends, and it follows from the concept of value set forth in the definition, that want-attracting power is the basis of value. But it is necessary to emphasize this fact so that there may not fail a clear distinction between the true basis of value and certain other economic phenomena, which, even when indispensable to value, are not in themselves the cause of value.

It is sometimes said that labor is the basis of value. But value does not exist merely because labor has been expended, even though some labor, if only that of appropriation, is necessary to the

Walker, *Political Economy*, §§ 119–128; Ely, *Outlines of Economics*, Bk. II., Part II., chapter ii.; Gide, *Political Economy*, trans., pp. 47–68; Clark, *Philosophy of Wealth*, chapter vi.; Laughlin, *Elements of Political Economy*, chapter x.; Mill, *Principles of Political Economy*, Bk. III., chapters ii.–vi.; V. Wieser, *Natural Value*, trans., Bks. I., II.; Böhm-Bawerk, *Positive Theory of Capital*, trans., Bk. III.; Pantaleoni, *Pure Economics*, trans., Part II., chapter iii.; Marshall, *Principles of Economics*, Bk. III.

existence of value. Hence the amount of want-attracting power possessed by a commodity does not correspond to the amount of labor that has been expended upon it, nor does its value bear any necessary quantitative relation to the amount of labor expended. Indeed, labor is often expended without resulting in value at all, because no one desires that which is produced or because nothing is produced.

According to another but similar view, cost of production is the basis of value. There are wide differences of opinion as to what is meant by cost of production. But it is not the basis of value according to any of the views entertained as to its nature, even though in the production of want-attracting power there must be some cost, however slight. The objections to this view are substantially the same as those in the case of the labor theory. Expenditure of energy does not necessarily result in value. If the product is not wanted, it has no value, however large its cost may have been. Hence value does not depend upon the cost of production, although under some circumstances, as will be seen later, the two may sustain an important relation to each other.

23. Value results from the want for a specific commodity. To discover, then, the principles governing value, the want-attracting power of a specific commodity must be the object of consideration. This specific commodity constitutes a definite portion of the supply of that commodity, and may be

designated a unit of supply. The conditions determining the want for a unit of supply are: (1) the intensity of the demand for the kind of commodity in general, and (2) the number of units or the supply of the commodity.[1]

That the intensity of the demand for a given kind of commodity will affect the want for a unit of the supply of that commodity is evident. The want for a unit of the supply of bread, say a loaf, will differ with different degrees of hunger and with different degrees of liking for bread as an article of food. A loaf of bread, if sold to the highest of several bidders having equal ability to purchase, would be shown to be wanted more by one of the number who was starving or who found bread a desirable sort of food, than by one whose hunger had recently been satisfied or who had difficulty in digesting bread.

But the want for a specific loaf of bread will be influenced also by the number of loaves available, for this determines the ease or difficulty with which another loaf can be obtained. And the more easily another can be secured, the less intense will be the desire for the specific loaf in question. Though a

[1] In speaking of units of supply, it is assumed that all are of the same quality. So far as economic science is concerned, differences in quality constitute different kinds of commodities. No. 2 wheat is a different kind of commodity from No. 1 wheat as truly as corn is a different kind of commodity from wheat, though the degree of difference between the former is not so great as between the latter.

man were so hungry that he would give a dollar for a loaf of bread rather than go without it, the want-attracting power of a given loaf is not equal to that of a dollar, if the supply of loaves is so abundant that another can be secured for five cents. The want for a given unit of bread is not large, no matter how hungry the man or how excellent the bread, if another loaf can easily be obtained.

It follows then that the greater the demand with a given supply, the greater is the want-attracting power of a unit of that supply, and, *vice versa*, the less the demand, the less is the want-attracting power of a unit. And, on the other hand, the greater the supply of a commodity, with a given demand, the less is the want-attracting power of a unit, and, *vice versa*, the less the supply, the greater is the want-attracting power of a unit. Value, then, is determined by the relation of supply and demand.

The supply of a commodity is the amount that is available for meeting wants. But the want for a commodity may be due to a desire to provide for the future, and the intensity of the want for an existing unit of supply may be influenced by the prospective ease or difficulty with which the commodity can be secured in the future, *i. e.*, the value of a given unit of supply depends in part upon prospective supply. Moreover, not all portions of the supply of a commodity actually in existence exert the same influence upon value. That which is kept out of the market in anticipation of a higher

price does not influence value the same as that which is offered for sale. A distinction may, therefore, be made between active and potential supply, the former including all of a commodity that is actually available at a given time and the latter, that which is prospectively available.

A similar distinction may be made between active and potential demand. Some wants, though satisfied at times, recur. Moreover, changes in conditions, such as a decrease in prices, may lead wants that were dormant to manifest themselves. The wants that actually seek satisfaction under given conditions constitute active demand, while those wants which may become active constitute potential demand.

The fact that the active supply and demand may increase and decrease because of changes in price, may appear to contradict the statement that value depends upon the relation of demand and supply. A decrease in price may result in the withdrawal of some of the supply or in the addition of some demand ; while an increase in price may result in the increase of supply or decrease of demand. From this it appears to be possible that demand and supply are determined by value through price, instead of value being determined by demand and supply. The contradiction is, however, but apparent. It is future demand and supply that are influenced by movements in price. The value at any given time depends upon the relation then existing between demand and supply.

24. From the fact that value is determined by the relation of demand and supply, it follows that value is subject to variations when changes occur in that relation. A change in the relation of demand and supply occurs whenever there is a change in either demand or supply which is not exactly offset by a corresponding change in the other. Moreover, changes in the relation of demand and supply are the rule rather than the exception. The supply of commodities seldom, if ever, remains constant, and even though it did for a time, if a change occurred in wants, this would change the relation of demand and supply and result in a variation in value.

It will be observed, also, that whenever the change in the relation of demand and supply is due to an increase in demand or to a decrease in supply, *i. e.*, whenever the change is an increase in relative demand or a decrease in relative supply, the value of a unit increases. And, conversely, whenever the change in the relation of demand and supply is due to a decrease in demand or to an increase in supply, *i. e.*, whenever the change is a decrease in relative demand or an increase in relative supply, the value of a unit decreases. That is to say, variations in value move in the same direction as variations in demand and inversely to variations in supply.

This statement as to variations in value pertains to the value of units of supply rather than to the value of the entire supply. As to what effect

variations in supply will have upon the value of the total supply, no universal principle can be laid down beyond this; whether an increase or a decrease in the number of available units of supply will cause a corresponding or a converse movement in the value of the entire supply, depends upon the effect of the variation in the supply upon the value of a unit. An increase in supply might so far decrease the value of a unit as to decrease the value of the total supply; on the other hand, a decrease in supply might increase the value of a unit to such an extent as actually to increase the value of the total supply. For example, an increase in diamonds, by making them common, might so decrease the demand as to diminish the value of the total supply of diamonds, while a decrease in their supply might have an opposite effect. The value of the total supply of a commodity depends upon the value of a unit and the number of units.

25. The principles which govern in the determination of value and in variations in value are sometimes combined and called the law of value, which may be thus stated: *Value is determined by the relation of demand and supply and varies because of variations in demand or supply, moving in the same direction as demand and inversely as supply.* The importance of this law to the interpretation of economic phenomena and to the formulation of precepts for the control of the economic affairs of society can hardly be overestimated, and calls for a correct understanding of its exact content.

It is sometimes inferred that, because variations in value are due to variations in supply or demand, there is a definite quantitive relation between changes in supply or in demand and changes in value. According to this view, if the supply of a commodity doubles the value of a unit of the supply decreases one-half, and if the supply of a commodity decreases one-half, the value of a unit doubles. Such a conclusion is false and is in no way involved in the law of value. The extent to which a change in supply will affect value depends upon the status of the want for the commodity. If before the change in supply, nearly all the want for the commodity was met, a given increase in supply will cause a relatively large decrease in the value of a unit, because such an increase in supply will enable a unit of the supply to be obtained much more readily. On the other hand, if an increase in supply finds a large unsatisfied want awaiting it, the result of such an increase in supply will be a very slight fall in the value of a unit. In like manner, a decrease in supply will cause a large or small increase in value according to the accompanying status of the want. The nature of the want, the availability of other commodities which may be substituted for the one in question, and many other conditions enter to determine to what extent changes in supply will affect the value. Moreover, variations in the supplies of different commodities do not necessarily nor probably cause the same degree of variations in the values of the two commodities.

The attempt to formulate a statement of the quantitive relation between variations in supply and variations in value can not succeed so long as the phenomena of human wants elude the efforts to discover in them uniformly constant tendencies.

It should be noted, too, in this connection, that variations in the annual output of commodities do not indicate the extent of variations in the supply of commodities, except when the commodities are of such a character that each year's supply is consumed annually. Thus to compare changes in the supply of wheat and of gold by comparing the annual output of these commodities involves a serious error. The annual product of gold, silver and other similar commodities but adds to a supply that is already large, whereas the annual product of wheat, potatoes and commodities similar to these, is approximately a renewal of the supply.

26. Price is value expressed in terms of a measure, hence the price of any commodity is the ratio of its want-attracting power to the want-attracting power of the commodity with which it is compared. It follows, then, that the price of a commodity will fluctuate with changes either in the amount of its want-attracting power, *i. e.*, its value, or in the amount of the want-attracting power, *i. e.*, the value, of the commodity which serves as a measure. Thus if the value of a pound of sugar is equal to the value of one-half a yard of cloth, the price of a pound of sugar is one-half a yard of cloth. Now, if either the value of the pound of sugar changes,

without a corresponding change in the value of cloth, or the value of a yard of cloth changes without a corresponding change in the value of sugar, there results a change in the price of sugar in terms of cloth. Suppose, for example, that the value of sugar doubled, the value of cloth remaining the same, then the value of a pound of sugar would be equal to the value of a yard of cloth, and the price of a pound of sugar would be one yard of cloth. In like manner, if the value of cloth increased, say to double its former amount, the value of sugar remaining unchanged, then the value of a pound of sugar would equal the value of a fourth a yard of cloth, and the price of a pound of sugar would be one-fourth a yard of cloth.

But, as has been seen, value is subject to variations because of changes either in the supply of a commodity or in the demand for it. Since, then, the price of a commodity is dependent upon the relation of two values, each of which is subject to variation because of changes in supply or demand, it follows that price is subject to variation from the four following causes: (1) from variations in the supply of the commodity itself or (2) in the demand for it, or (3) from variations in the supply of the commodity taken as a measure, or (4) in the demand for that commodity. Thus an upward movement in the price of a commodity will result from an increase in the demand for it, or from a decrease in the supply of it, or from a decrease in the demand for the commodity that serves as a measure,

or from an increase in the supply of that commodity. A fall in price will result from any one of the four converse changes in demand and supply.

From the nature of price and its relation to value, it follows also that a movement in the price of one commodity involves a movement in the price of the commodity that serves as a measure, and that these movements are in opposite directions. Thus an upward movement in the price of one commodity results from an increase in the ratio of its value to the value of a second commodity, with which the first is compared. But this involves a decrease in the ratio of the value of the second commodity to the first, and, therefore, a fall in the price of the second commodity in terms of the first. If the price of sugar in terms of cotton goes up, the price of cotton in terms of sugar goes down, and *vice versa*.

The dependence of price upon the supply of and demand for commodities and the two-fold nature of price fluctuations are often unperceived because of the method by which prices are fixed in business transactions. For prices do not move up and down like mercury in a thermometer as the result of physical changes and exactly coincident with them. Prices are fixed through the medium of human judgment, so that actual changes in supply and demand affect values and, therefore, prices, only as they affect the judgments of men. Moreover, though the method of fixing prices consists at times in the bidding by purchasers, who offer more or less according to their judgment as to the

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conditions of supply and demand, more often the method employed consists in offering a commodity at a price fixed by the seller, who increases or decreases the price according to his opinion of the conditions as revealed by the intensity of the demand. But it is not the less true in this case that prices depend upon the relation of demand and supply, for the intensity of demand which determines whether the seller will alter the price, varies with the supply believed to be available.

Moreover, the supply of commodities is itself not a purely spontaneous matter, but is the result, to some extent, of men's judgment. The supply actually available depends in part upon the amount actually produced and in part upon the disposition of the owners thereof to part with it. Self-evident as this is, it requires mention, for it is too often assumed that the normal economic process consists merely in producing commodities and placing them on sale for what they will bring, whereas man's judgment, as he seeks the maximum of want-satisfaction, affects not only what is produced, but where and when and how it is disposed of. And the results of judgment as to the disposal of commodities are quite as important to the economic process as the results of judgment are to what shall be produced.

27. The relation of the law of value to price has been illustrated by examples in which prices are determined by comparing the values of commodities with each other directly, without the use of a stand-

ard measure of value. The introduction of a standard measure of value, though of great importance to economic activity, in no way alters the fundamental principles according to which prices are determined. A standard measure of value is a definite amount of some specific commodity whose value society decrees shall be considered constant in the settlement of contracts; that is to say, in enforcing the fulfillment of contracts, society requires the payment of a definite amount of the commodity which is recognized as the standard, or its equivalent in value, taking no account of variations in the value of that commodity, which result from changes in the relation of demand and supply. The employment of the standard in measuring values is not usually compulsory. The values of commodities may be compared with each other directly, as is sometimes done in trading horses for example, or they may be compared with any other commodity which may be agreed upon. But when society is called upon to enforce the fulfillment of a contract, it estimates the obligation involved by comparison with the standard measure and requires payment accordingly.

The use of a standard measure tends to conceal the real nature of the process of measuring value, for its employment results in the determination of the relation of the values of commodities by comparing each with a third commodity instead of with each other, except when the commodity which serves as the standard measure is one of the two

directly concerned. And it may be that the individual who makes the measurement (comparison) in any case is not aware of the use of the commodity that is the standard measure, the first steps in the process and the function of the standard measure being lost to view in the complexity of the operation. The comparison of value in any given case may be made by the use of something other than the standard, whose value has been determined in the first instance by comparison with the standard measure.

When to this is added the fact that in expressing value, the special name given to the standard measure is used, instead of the name of the commodity, the mystery of the process is increased. Thus in the United States, at the present time (1901), the standard measure is 23.22 grains of gold. This is called a dollar. In considering the purchase of a hat whose value is estimated to be equal to that of 46.44 grains of gold, and whose price accordingly is said to be two dollars, an individual compares his want for the hat with his want for something else, say a pair of gloves, whose price is also two dollars. As a matter of fact the prices of the hat and gloves were determined in the first instance by a comparison of their values with the value of 23.22 grains of gold, or, perhaps, by comparison with something else whose value had been compared with the value of gold. For that matter, the estimate of the relation of the values of the hat and gloves to the value of gold may have been reached by any num-

ber of intermediate measurements, and throughout the operation no one may have been aware of the fact that he was making a measurement. The measurement may have been accomplished merely as a result of the choice of this or that thing in preference to another. To the person considering the relation of his want for the hat to his want for the gloves, expecting probably to pay for one or the other with dollars of paper or of silver, the function performed by the 23.22 grains of gold does not appear, and he comes to view a dollar as standing for an absolute amount of value, quite apart from its connection with any particular thing, a condition which further consideration shows to be an impossibility.

Still another source of confusion is found in the fact that society may recognize in law more than one standard measure, calling them all by the same name, and leaving it to individuals to use whichever they prefer. Thus, if society so decrees, the standard measure may be 23.22 grains of gold, 371.25 grains of silver, and anything else having value, even a promise to pay whose value will depend upon the confidence of the people in it. Each of these may be called a dollar. But it does not follow that the values of these several dollars will be equal. Whether they are or not will depend upon whether their respective powers to attract wants are equal. A community might have several John Smiths, but they would not necessarily have anything in common except their name. Exactly

the same is true when society recognizes several standards of value and calls them by the same name. A dollar is not a definite amount of value; it is a definite amount of some commodity or commodities, to which that name is arbitrarily given and the values of which depend upon the relation of the supply thereof to the demand therefor.[1]

28. As has been seen, a movement in price may be due to causes affecting the commodity directly or to causes affecting the commodity which serves as a measure. In any given case it is impossible to determine to which of these the movement in price is due, except in so far as the conditions of supply and demand in their relation to the commodities can be determined. In measuring value it is assumed that the value of the measure is constant, but this assumption may be contrary to fact, for the value of the measure is dependent upon the relation between the supply thereof and the demand therefor, the same as are the values of other commodities, and those conditions are subject to variation. This fact receives added importance from the widespread but erroneous belief that when society selects a definite amount of some commodity as a standard measure of value, it fixes not only the amount of the commodity which is to be recognized as a standard, but also the value of that commodity as well. But so-

[1] It is not to be inferred from the above statement that it is a matter of indifference what or how many standards of value society adopts. That is a matter which belongs to the discussion of the money problem.

ciety's refusal to take account of fluctuations in the value of its standard when contracts are enforced, does not make the value of the standard constant. If society's recognition of some commodity as a standard measure of value affects the relation of the supply of that commodity to the demand therefor, the act of society affects the value of that commodity. But so long as society can not absolutely control both supply and demand, it can not absolutely fix values.

4

THE ECONOMIC PROCESS

29. The efforts of men to satisfy their wants taken in their entirety constitute the economic process, which may be defined as the totality of human activities in their relation to the pursuit of the satisfaction of wants. Rightly viewed, this process constitutes a whole composed of many parts. A due recognition of this fact is absolutely essential to the attainment of valid economic principles. The nature of the process will be better understood by considering the general character of the activity of which it is composed, the normal manifestations of that activity, the conditions essential to progress and the steps in the process.

Ely, *Monopolies and Trusts*, chap. i.; *Competition: its Nature, its Permanency, and its Beneficence*, in publications of the American Economic Association, Third Series, Vol. II., p. 55; Sidgwick, *The Principles of Political Economy*, Bk. II., chap. x.; Mill, *Principles of Political Economy*, Bk. II., chap. xvi., § 2; Baker, *Monopolies and the People;* Jenks, *The Trust Problem;* Walker, *Political Economy*, § 129; Clark and Giddings, *The Modern Distributive Process*, chap. ii.; Laughlin, *Elements of Political Economy*, § 94.

30. In seeking the satisfaction of wants, as in all other manifestations of his nature as a human being, man acts as a member of society. That is to say, in their economic pursuits, men sustain relations to each other, and as the distinguishing characteristic of society is relationship, men are social beings economically as in other respects. It will not suffice, then, to isolate acts for the study of their characteristics and from such study to formulate general principles. To learn the true significance of any act, it must be observed not only by itself but also in relation to other acts. For no act by itself reveals its full economic significance, its complete bearing upon the satisfaction of wants, because it is not without influence upon other acts. Though some may seem to be concerned only with the individual who performs them, they are never wholly devoid of social character. This fact can never safely be lost to sight in economic investigations. True, the economic process as a whole is a more or less intangible affair. Men seldom think of the social character of their efforts. An individual turns his activity in this or in that direction because he believes that the course selected will best conduce, under the circumstances, to the satisfaction of his desires. He may be and usually is wholly unaware of the fact that his choice has been determined in no small degree by other conditions, and that his own act, which seems to have but slight consequences apart from himself and at most his immediate neighbors, is in fact part of a whole

and in vital relation with it. But, though the activities which constitute the economic process present themselves as individual matters, when one passes from the visible and apparent to inquire as to causes and effects, the true character of individual action as part of an organic whole becomes evident.

On the other hand, activity possesses an individual, as well as a social character. The economic process manifests itself in the form of the activity of individuals; its ends are realized through the efforts of individuals to satisfy their wants. In the last analysis, social activity is but the activity of individuals. Hence economic activity is individual activity; economic conditions are the result of individual conditions; and economic progress, if realized at all, is attained only when individual activity, directed primarily from the individual's standpoint and for individual ends, is so ordered as to promote the efficiency of the process as a whole.

Nor is this true only in the case of such activity as purports to be directed towards private ends. The activity which is professedly aimed at the attainment of social ends is after all individual activity and the ends sought are individual ends in that they are an individual's idea of social ends. The difference between the activity of the philanthropist and that of the manufacturer, in their relation to the general welfare, is primarily a difference in the conscious motive which each sets before him, rather than in the method of attaining the common

good. There is or may be a wide difference between the wants of the two, but the activity of each is individual activity; it follows in both cases from individual judgment; and, in the case of the manufacturer as well as of the philanthropist, there is a vital relation between the individual act and the economic process as a whole. The extent to which each promotes the general good depends upon the harmony existing between the individual choice and the reqirements of that general good. Whether the result of the action of the philanthropist will in the end be promotive of the progress of society can not be foretold with greater certainty or completeness than can the results of the acts of the manufacturer or of any other person, whose conscious motives seem to center directly upon self.

Individual activity, then, is the immediate object of economic investigation. But to understand individual activity and especially to arrive at conclusions which will have more than a passing significance, individual activity must be considered both in its social and in its individual character.

31. The question as to what sort of activity is normal to the economic process is one of the first inquiries that arise when the attempt is made to discover the principles which govern in that process. To determine what constitutes normal economic activity, it is necessary to ascertain the conditions essential to the attainment of the satisfaction of wants, for that which is inseparable from success in the effort to satisfy wants must be considered nor-

mal to the process. Observation of the process shows that success in securing the satisfaction of wants requires (1) that the obstacles to want-satisfaction be surmounted, and (2) that the individual possess such economic strength as will enable him to surmount those obstacles. Self-evident and even commonplace as these facts may seem, they are of great importance to economic theory. From these two essentials to success it follows that the activity of an individual seeking want-satisfaction will be directed both towards surmounting the obstacles in the way of the satisfaction of wants and towards acquiring the economic strength necessary thereto. Turning to actual experience, it is seen that this is just what men do.

But these two aims are closely related. Though they may present themselves to individuals as distinct, as a matter of fact they are by no means independent of each other. For, it will be observed, it is by surmounting obstacles and securing the satisfaction of wants that economic strength is acquired, and it is by acquiring economic strength that one is able to surmount the obstacles to want-satisfaction. In other words, every act, viewed from the standpoint of its economic significance is at once an effort to surmount obstacles to the satisfaction of wants and an effort to acquire economic strength which makes possible the surmounting of obstacles.

32. The importance of the above conclusion becomes especially marked when considered in its

bearing upon the activity of men in society. Here rivalry appears between individuals, because the attempt to satisfy wants gives rise to conflict of interests. Thus men appear as rivals in endeavoring to secure trade, in seeking employment, in bidding for contracts, in settling upon terms for the division of the results of a common enterprise, and in many other ways. Rivalry of interest leads to contest; this, as an economic phenomenon, is called competition, which may be defined as *the contest between rival interests among members of society in the pursuit of the satisfaction of their wants.* Though the existence of competition in many instances may be seen and the parties thereto easily recognized, competition is not limited to such cases. For a rivalry of interests often exists and influences activity without a definite knowledge on the part of those concerned as to who their rivals are or as to the exact nature of the rival interests. In fact, there is rivalry of interests wherever the effort by one to satisfy his wants interferes with the efforts of another.

Viewed in relation to the efforts of individuals to secure the satisfaction of their wants, rival interests present themselves as obstacles to the accomplishment of that end. From the standpoint of individuals, then, competition is the effort to surmount the obstacles to the satisfaction of wants, which are involved in rival interests among members of society. As thus described, competition is a normal economic phenomenon, and the activity involved in

competition must be considered normal, because it arises naturally from the attempt of individuals as members of society to satisfy their wants.

Activity is directed also to acquiring economic strength, without which obstacles could not be surmounted and wants would remain unsatisfied. This appears, for example, in the attempt of individuals to collect enough of the necessaries of life to make them independent of unforeseen accidents; it appears also in the effort to obtain such tools and other instruments as may enable one to secure the satisfaction of his wants more efficiently. It may manifest itself in the efforts of an individual to secure to himself alone the economic strength which will enable him to surmount opposing obstacles, or it may consist in the union of the forces of several to the end that the combined strength may be able to accomplish that for which the strength of each by himself is inadequate. Moreover, economic strength may result either from a union of forces which involves a definite agreement or from a common policy which arises merely from the recognition by each that his interests will be promoted by acting in accord with others. There is doubtless great difference in the permanence and efficacy of the two methods of securing common action, but to the extent that they are effective, each gives to those concerned increased economic strength. Indeed, the common policy is not necessarily a conscious one. Economic strength is developed wherever men

act in harmony with each other instead of in antagonism to each other. But whether economic strength results from the efforts of individuals by and for themselves alone or from the working together of several to secure the advantage that comes from united effort, and whether the united effort results from a specific agreement or from the common impulse of those concerned, the fundamental character of the phenomenon is the same. It is concentration of economic power.

Economic strength gives power of control over the conditions for success in the satisfaction of wants. When this affects the relation of men in society, it becomes monopolization, which may be defined as *power of control in the contest between rival interests*. From the standpoint of the individual, monopolization is the concentration of economic strength which enables one to oppose the rival interests that are an obstacle to the satisfaction of his wants. As such, monopolization, like competition, is a normal economic phenomenon, and the activity aimed at the attainment of monopolization must be considered normal, for it also arises naturally and necessarily in connection with the efforts of individuals as members of society to satisfy their wants.

33. Both competition and monopolization are associated with rivalry of interests in society. The former is the attempt to surmount the obstacles to want-satisfaction which result from rivalry; the latter is the concentration of economic strength

which is necessary to oppose rival interests. But, as has been seen, the surmounting of obstacles and the concentration of economic strength, though they may appear as distinct aims, are in fact interdependent, and are features of every economic act. The satisfaction of wants which results from and can be attained only by surmounting obstacles, is the condition requisite to the acquirement of economic strength, which in turn is the condition requisite for surmounting obstacles. From this it follows that competition and monopolization sustain a close relation to each other. These phenomena are, in fact, attendant upon all activity which involves the rivalry of members of society in the effort to satisfy their wants.

From the nature of competition and the conditions under which men act, it results that there is always some competition, because rivalry of interests always exists, but *free* competition is impossible. Competition means contest between men. Free competition, then, means unrestricted contest between men, and the conditions for such contest do not exist. For competition to be unrestricted, the equipment of men for contesting must be equal, else one of the parties will achieve success and the other will lose his ability to compete and competition will cease. The inequalities among men are themselves insuperable obstacles to free competition.

Furthermore, for competition to be absolutely free, not only must men meet on equal terms in the con-

test, but their resources for maintaining the contest must be unlimited, else the contest will be carried to a finish and cease because of exhaustion. But the resources which enable men to contest with rivals are limited and this limits freedom of competition. Indeed, nature itself places restrictions upon competition through limitations in the supply of commodities and of the means for production. The extent of the limitations varies. There are wide differences in the degree of competition at different times and under different circumstances. It may be moderate or it may be intense, but it can never be full and free, *i. e.*, it can never be unrestricted.

It was at one time supposed that the only impediment to free competition consisted in legislative enactments, which secured advantages to some at the expense of others. Accordingly it was believed that the repeal of those enactments, leaving men on equal terms before the law, would insure entire freedom of competition. But it has come to be realized that freedom from legislative control is at best negative freedom, and that true freedom involves much more.

It follows, furthermore, from the nature of monopolization and the conditions under which it appears that the element of monopolization is always present but *absolute* monopolization is impossible. It is necessary to distinguish here between power of control over specific commodities and power of control in the contest between rival interests,

though the two are closely related. A large degree of power of control over commodities is given by the mere fact of ownership. But the effect of ownership upon the relation of men in society varies greatly under different circumstances. On the one hand, it is evident that the mere fact of ownership confers upon the owner some power of control in his contest with rivals, and this power of control is monopolization, be it ever so small. Indeed, so long as contest between rivals exists in society the element of monopolization can never be wholly wanting, for some power of control is inseparable from such contests. But however absolute and extensive ownership may be, neither it nor any other condition can confer upon one absolute power of control in the contest with rivals. There is always a limit beyond which no man can control others and make them subservient to himself. As in the case of competition, there are wide differences between the degrees of monopolization in different cases. In many instances, it is so slight as to be of little, if any, practical moment, while in others it may be so great as to be fraught with most serious consequences. But absolute monopolization cannot exist.[1]

The foregoing analysis of the nature and persistence of competition and monopolization is of the highest importance to the interpretation of the economic process. For, if free competition is im-

[1] See Pt. III., iii. Exchange.

possible, an economic theory which rests upon its assumed existence cannot be an adequate interpretation of human activity in its relation to want-satisfaction. On the other hand, if monopolization is inseparable from the association of men for economic ends, the economic theory which treats it as incidental and temporary must also be inadequate. Moreover, the view of competition and monopolization here presented has more than a theoretical importance. Influenced largely by the teachings of economics, the opinion prevails very generally that the ideal condition of society is one in which competition is full and free and that in some way or other such a condition is attainable. Hence efforts are directed towards the realization of that end. Thus far the results obtained give but little hope of success and many persons, in despair, are inclined to extreme measures. The practical bearing of the conclusions here reached is to be found in their teaching that social evils, in so far as they result from either competition or monopolization, are to be remedied by such measures as will prevent them from becoming excessive rather than by attempts to eradicate them, for their eradication is impossible without destroying society itself.

34. The fundamental condition of all progress is that the fittest should survive and become more fit. If the opposite were true, if the less fit survived and became, as time passed, less fit, not only would there be no progress, but there would be actual retrogression. It is because in farming, in manufac-

turing, in commerce, and, indeed, in all spheres of activity, better methods supplant poorer, that society progresses in economic efficiency. Horse-power has been supplemented and for some purposes supplanted by steam-power; the stage-coach and sail-boat have in large measure given place to the railroad and steamboat; after the sickle came the cradle, then the reaper, the self-binder and finally the combination harvester, which cuts, gathers and threshes.

In this respect economic progress but shares in the condition necessary for development of any sort. Even moral progress is attained only through the survival of the fittest and its increasing fitness. Higher concepts of rights and duties pervade society, taking the place of such as are inferior—only thus does one age become better than its predecessor. Rights of life, of family, of property, of speech, of free-movement, of self-government,—in all of these, as history shows, higher and broader ideals have supplanted lower and narrower ones and a better civilization has resulted.

35. The process of selection by which the survival of the fittest is realized involves a contest. The old does not give place to the new without a struggle. Indeed, it may be that fitness can be determined only by a contest. In society this contest involves rivalry of interests among its members, for it is always to the immediate or apparent interest of some that the old should continue, and to the interest of others that the new should be substituted

for the old. This contest is competition, and herein appears the fundamental reason for its existence, —its purpose in the economic process. Competition is one feature of the process of selection. It is through competition that the fittest supplants the less fit, hence competition is absolutely essential to progress.

But the survival of the fittest is not accomplished through competition alone. If the fittest is to supplant the less fit, it must possess power of control sufficient to enable it to carry on the contest and to win. This power of control is monopolization. Herein lies the importance of monopolization to economic progress. It performs a function in the economic process as essential as that of competition. Monopolization enables the contest to be carried on by which the less fit is supplanted.

In addition to the services mentioned, competition and monopolization render others, in that each tends to counteract the evils of excess in the other. Competition is strife and strife, if carried too far, becomes exhausting. Competition is not an end in itself; it is a means to an end, the survival of the fittest. To prevent competition from defeating its own end, through exhaustion of energy, there must be such power of control as will prevent the contest from being too long continued. Monopolization, then, besides making possible a contest with rival interests, affords the power of control necessary to prevent exhaustion.

But the mere possession of power of control does not insure progress. To accomplish this, the power must be used. Without activity power of control results in stagnation and deterioration. That which is necessary to call power of control into activity, is contest with rival interests, *i. e.*, competition. Competition, then, not only aids in the survival of the fittest, but prevents that which survives from becoming less fit through stagnation.

The view here presented of the nature of competition and monopolization and of the function performed by them in the economic process, may seem at first to be wholly at variance with the view of these phenomena commonly entertained. Further examination, however, will show that whatever of difference exists, is due in part to the fact that the popular view rests upon a superficial analysis of the economic process and in part to an unscientific use of terms. The statement that the primary service of competition is to aid in securing the survival of the fittest is reflected in the popular dictum that "competition is the life of trade." The further fact that competition is not necessarily a a blessing, that its excess may mean decreased economic efficiency, is a truth already recognized by the popular mind, and one that is beginning to affect economic theory.

In the case of monopolization, the difference between the view here presented and popular opinion is greater than in the case of competition. As

yet but little attempt has been made to analyze the economic process for the purpose of ascertaining the place of monopolization therein. A good and a bad side to concentration of strength are recognized by society substantially as in the present analysis, but on its good side the concentration of energy is called "coöperation" or the "growth of large industries," while on its bad side it is called "monopoly." But the phenomena described by these terms are inseparable. Both "coöperation" and the "growth of large industries" involve an increase in the power of those concerned to control the conditions of success in the contest with rivals.

Moreover, the popular view considers the element of monopolization to be present only when power of control is so extensive that the welfare of society is believed to be endangered by it; while the present analysis insists on recognizing the phenomenon of power of control and on calling it by the same name, regardless of its amount. It requires but slight consideration to see that the essential character of monopolization, even in the popular view, is power of control. But power of control is relative and should be recognized as such wherever it is found.

36. In the economic process as society is now ordered, there are two steps;—(1) the correlation of things and wants to bring into existence want-attracting power and (2) the division of this want-attracting power among members of society. The

first of these steps is called production. If in the economic process each man acted wholly by himself, there would be but this one step. But in society men combine their forces to render them more efficient. From this, there arises the necessity of dividing the results of production among the members of society. This step is called distribution. Before wants are satisfied a third step is necessary, *i. e.*, the actual application of things to wants. But this, the consumption of commodities, lies outside the scope of economic investigation, except in so far as it affects production and distribution.

PART II

PRODUCTION

1

PRODUCTION

37. The process of correlating wants and things has been described as the first step in the general economic process. This, as has been said, is the production of wealth. It consists in bringing wants and things into such relation that want-attracting power results, and may be accomplished in either of two ways: (1) by the adaptation of things to wants and (2) by the adaptation of wants to things. The former is the production of supply; the latter is the production of demand.

In its ordinary forms, the process of producing a supply of wealth is easily recognized. The farmer plows, sows and reaps, and there is produced grain, which as food nourishes man; or fibres, which, made into textiles, protect and adorn him. The miner drills and blasts, and there is produced

Sidgwick, *The Principles of Political Economy*, Bk. I., chap. i.; Ely, *Outlines of Economics*, Bk. II., Part I., chap. i.; Mill, *Principles of Political Economy*, Bk. I., chapters iii., xii.; Walker, *Political Economy*, §§ 45, 46, 49–53; Laughlin, *Elements of Political Economy*, chapters ii., iii.; Marshal, *Principles of Economics*, Bk. IV., chapters ii., xiii.

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fuel, which warms the body or aids in generating power. The carpenter saws, planes, and fits, and there is produced a dwelling-house or a factory. But productive activity is not limited to assisting nature to bring forth commodities nor to changing the forms of materials in order to adapt them to wants. It includes also the activity engaged in transporting, storing, exchanging and otherwise making available that which may attract wants. The farmer, mechanic and miner produce wealth; and so also do the carrier, the merchant and the banker, because the latter, as truly as the former, are engaged in forms of activity which increase the power of want-attraction. For, in order that a commodity should be able to attract wants, it is necessary (1) that it possess the requisite physical properties; (2) that it have the desired form; (3) that it be at the place where it is wanted; and (4) that it exist at the time when it is wanted. He who sows and cultivates aids in bringing together the requisite physical properties. He who grinds the wheat or saws the log or hammers the iron aids in giving proper form to commodities. That these are engaged in producing wealth is evident. But the railroad employees from president to section-hand aid in placing commodities *where* they are wanted. So also do the merchant and the banker. These, then, produce wealth as truly as do the farmer or the mechanic, for it is fully as important to the existence of want-attracting power that things should be where they are

wanted as that they should have the requisite physical properties and form. In addition to this, the merchant, whether jobber or retailer, aids in making commodities available *when* they are wanted. This also is a feature of the production of a supply of wealth. He who keeps ice from winter, when it is wanted but little, until summer, when the want for it is intense, produces wealth just as truly as the miner who digs coal and aids in bringing it to the surface. The same is true of all who by storing commodities keep them until the want for them increases and they come to have an increased want-attracting power. The production of wealth is not the mere production of commodities, it is the production of want-attracting power.

Furthermore, as has been pointed out, wealth does not consist wholly of tangible things. Hence the production of wealth is not limited to those forms of activity that are expended upon tangible things. The singer who meets the want for music produces wealth. So also does the scholar searching out truth and contributing to the satisfaction of the desire for knowledge; likewise the judge, deciding controversies and enunciating the principles according to which peaceful association is promoted; and the clergyman, ministering to man's religious wants. It might be maintained that these are producers of wealth even if the conception of wealth were limited to tangible things, because such persons indirectly increase the efficiency of the activity engaged in producing tangi-

ble wealth. This, however, is but a partial view. The wants which come within the scope of economics are not simply such as are centered upon tangible things but include all that pertain to human nature, and every act that contributes to the production of that which will attract human wants, is part of the productive process.

The process of production is commonly thought of as consisting only in the production of supply, *i. e.*, in the adaptation of things to wants. Little attention has been given in economic theory to the other phase of the process, the production of demand, though in practice this phase of the process is by no means neglected. That wealth is produced, *i. e.*, that want-attracting power is created by the development of demand is attested by the facts of every day experience, where the development of demand gives want-attracting power to that which before did not possess it or increases that power in commodities which already possess it in some degree. An example of this is found in the case of cotton-seed already mentioned, where that which was an obstacle to the satisfaction of wants was changed into a serviceable commodity by the development of a demand for it. No small part of the energy expended in business is directed towards the development of demand.

38. From an economic standpoint, an expenditure of energy is productive whenever it results in the existence of want-attracting power and unproductive only when it fails to accomplish that

result. A view sometimes held limits productive activity to such as results in the production of so-called material wealth.[1] But such a concept is both unscientific and unfortunate in its practical effects. If wealth consists of whatever possesses want-attracting power, effort should be considered unproductive only when no want-attracting power results therefrom, *i. e.*, when there results neither a supply of something that is wanted nor a demand for something that exists. The designation of effort as productive only when it results in material wealth, tends to overestimate the importance of such effort in comparison with that which is not expended upon material commodities. And, however distinctly those who hold such a view of the difference between productive and unproductive effort, may declare that productive in this sense is not synonymous with useful, it is difficult to avoid leaving the impression that what is unproductive is useless.

39. While, however, an expenditure of energy is not to be classed as unproductive so long as want-attracting power results, there are wide differences between the relation of returns to outlay under different conditions, and these have an important influence upon the activities of men. Thus it is evident that in such an industry as farming, the amount of wheat that any given acre will yield does not depend merely upon the energy expended.

[1] Mill, *Principles of Political Economy*, Bk. I., chap. iii., §§ 1–4.

It may be that where an acre has yielded 6 bushels, the application of double the amount of energy will produce 12 bushels or even more, and that another proportional increase in outlay will produce 24 bushels or more. But there is a limit beyond which such results cannot be obtained. If an acre produces 75 bushels with a given expenditure of energy, double that outlay will not give 150 bushels.

The principle involved has been formulated as follows:—in the production of commodities, conditions arise in which an added expenditure of energy will not give a proportional increase in returns. This is called the law of diminishing returns. Though the limits of the operation of this law have not been definitely determined, it is generally believed that it applies especially to the production of raw materials, to the so-called "extractive" industries.[1] But since all industries are dependent in some degree upon raw materials, the influence of the principle reaches with greater or less force throughout the entire range of industrial undertakings.

On the other hand, there are many instances in which the returns of an industry can be increased without a proportional increase in outlay of energy. Thus a railroad, once built and equipped, can under some conditions double its carrying capacity without necessitating a correspondingly increased outlay. A second track can be built, the necessary

[1] Walker, *Political Economy*, p. 35, et seq.

rolling stock and other equipment added and a sufficient force of employees provided without requiring twice the expenditure for the original road. The same is often true of manufacturing enterprises. The principle here involved constitutes the law of increasing returns and is the converse of the law of diminishing returns. It may be thus stated:— in the production of commodities, conditions arise in which increased returns do not require proportional increase in expenditure of energy. As in the case of the law of diminishing returns, the limits of the operation of this law have not been definitely ascertained. In general, it seems to depend largely upon the extent to which human intelligence can offset the limits placed by nature upon the increase of wealth.

The laws of diminishing and of increasing returns are of special importance in their relation to the possible growth of population and the development of the standard of living. To the extent that the law of diminishing returns prevails, the possible increase of population and advance in the standard of living are limited. Should this law be ignored and the birth-rate increase to the full limit of the procreative capacity of mankind, the ultimate result would be the reduction of the standard of living approximately to the level of mere animal existence. There might even be a suppression of the growth of population, for the maintenance of population depends upon the food supply, and should this be inadequate, the increase in the death-rate

would tend to offset the effect of the birth-rate on the growth of population. The influence of the law of diminishing returns is counteracted in some degree by the operation of the law of increasing returns, but to what extent this can be carried is uncertain. Though the present rapid increase in the efficiency of the productive process may appear to render the influence of the law of diminishing returns upon population and the standard of living comparatively unimportant, the possible future consequences of the operation of that law, in view of the tendency of population to increase, makes its recognition by economic theory imperative.

The laws of diminishing and increasing returns are of importance also in their relation to the workings of competition and monopolization. Where the law of increasing returns is operative it tends to increase the power of control of those in whose favor it operates, especially as compared with the power of those who produce subject to the law of diminishing returns, for in production under the law of increasing returns, the cost per unit of product decreases when the amount produced increases, while the converse is true in production under the law of diminishing returns,—here the cost per unit of product increases when the amount produced increases. And he who produces at lower cost than his rivals, possesses a greater power of control in his contest with them. This is especially significant in its relation to rivalry in the exchange of commodities, where, as will be seen later, the posses-

sion of power of control enhances the ability of one to obtain the means for satisfying his wants.

40. The object of an analysis of the process of production is to ascertain the conditions upon which efficiency in this part of the economic process depends. The inquiry here is not concerned with the technique of specific industries such as farming, engineering, weaving and building, but only with those general principles which control in the production of the means for the satisfaction of wants. Fundamentally speaking, it may be said that since the production of wealth consists in producing a supply of commodities or a demand for commodities, the efficiency of the process of production depends upon the conditions requisite for efficiency in these two directions. The question, then, may be thus stated:—(1) given wants, how can the commodities necessary for their satisfaction be produced most efficiently, and (2) given commodities, upon what does the efficiency of the production of a demand therefor depend.

An analysis of that phase of the process of production which aims to provide a supply of commodities shows that efficiency here depends upon (1) the factors of production, (2) the economic organization and (3) the incentive to activity.

The factors of production are situation, capital, labor and enterprise. The efficiency of the productive process depends first of all upon the abundance and character of these factors. If they are plentiful and of good quality, the first condition of

effective production is met; if they are scarce or of poor quality, the process of production suffers accordingly. Next after the supply of the factors of production, the way in which productive forces are organized, conditions the efficiency of the process. Just as in war, the effectiveness of an army depends to a large extent upon its organization, so in the process of producing a supply of commodities for the satisfaction of wants, there must be a thorough organization for the highest efficiency. Furthermore, the economic process is not a spontaneous affair, in the sense that it must operate and that, too, efficiently regardless of human choice. A large and excellent supply of the factors of production and a thorough organization can accomplish little or nothing without an incentive that shall lead to the starting of the process and inspire its continuance until its purpose is accomplished. Factors and organization without an incentive resemble a machine without motive power. However excellent the material in the machine and however perfect the adaptation and adjustment of its parts, it can accomplish nothing without motive power.

41. The second phase of the process of production is concerned with demand. The production of demand is dependent in many respects upon the supply of commodities, hence the conditions of efficiency in the production of a supply affect also the efficiency of the development of demand. There are, however, certain other conditions which require

consideration in this connection in order to understand this phase of the productive process.

In general it may be said that the development of demand depends upon (1) the growth of population, (2) the development of wants and (3) the specialization of wants. For wants to exist at all there must be people, human beings, who constitute at the same time the want-storehouse and the want-generator. Man sustains three relations to the economic process. First and most important of all, he is the end for which the process exists and operates. It is because of him that the economic process is important. To him as the highest, and so far as may be known, the ultimate end of creation, all else is subordinate. When viewed from this standpoint, man is not merely an economic phenomenon, he is a social being, endowed with attributes which, in the general judgment of mankind in all ages, pertain not merely to the short span of human life, but possess an eternal significance. But this relation of man to the economic process as its *raison d'etre*, though of supreme importance, is not his only relation to the process. He is not only an end; he is also part of the means to the attainment of that end.

In the capacity of a means to the attainment of the end of the economic process, man, on the one hand, embodies two of the factors of production, labor and enterprise, and on the other, he embodies the wants whose existence and development are at once the immediate end of human activity and a

means for further development. These relations of man to the economic process are by no means independent of each other. The consequences of man's status as a means to the attainment of the end of the economic process affect so vitally his status as that end, that the one can never safely be disregarded in considering the other. Nevertheless, it is essential in seeking the general truths of economic activity, that these relations should be clearly distinguished. Bearing in mind, then, that the question here raised is as to the conditions of an efficient demand, it is evident that the first requisite is population.

It was stated at the outset that the existence of wants as an essential characteristic of human nature is one of the fundamental hypotheses of economics. Some wants exist and are active in creating a demand so long as life itself exists. But not all wants exist necessarily with the existence of life. At least, it does not follow that because there is life, all wants exist in an active state. It may be that the germs of all wants which characterize the most advanced development, exist in the lowest stage of life, or it may be that there is actually the growth of new wants as man progresses. So far as the science of economics is concerned, it matters not which of these theories is accepted, for in any event many human wants are not active in the lowest stage of development, but appear little by little as the wants which are active in any stage,

are met. Hence, whatever makes for the development of wants, affects the efficiency of demand.

Demand as an economic phenomenon requires the specialization of wants, that is to say, economic demand does not exist simply because general wants exist; the existence of economic demand requires that the general wants shall become specialized by being concentrated upon specific commodities. Thus, for example, the economic demand for wheat implies the existence of a general want for food and the concentration of that want upon wheat. The mere indefinite longing for something in general does not constitute economic demand. If there is a want that results in want-attracting power, it is because the general want has become centralized upon something in particular. The efficiency, then, of the production of wealth through the development of demand, depends not only upon the development of general wants but also upon their specialization.

2

THE FACTORS OF PRODUCTION

42. The factors of production are situation, capital, labor and enterprise. Of these, the first, situation, supplies a place for activity. Its necessity to the production of wealth is evident. Not all productive processes require the same amount of space. Some, such as the raising of wheat and the growing of forests, require a large area; others, such as the manufacture of shoes and the storing of commodities, require less; while still others may re-

Walker, *Political Economy*, §§ 47-98, 106-109, 303, 304; Ely, *Outlines of Economics*, Bk. II., Pt. I., chapters ii., iii.; Mill, *Principles of Political Economy*, Bk. I., chapters i.-vii., x., xi.; Marshall, *Principles of Economics*, Bk. II., chap. iv., Bk. IV., chapters ii., iv.-vii., xii. (In most instances the references to Marshall's *Principles of Economics* apply also to his shorter work: *Economics of Industry;*) Gide, *Political Economy*, trans., Bk. II., Pt. I.; Laughlin, *Elements of Political Economy*, Bk. I.; Roscher, *Political Economy*, trans., Bk. I., chap, i.; Jevons, *Theory of Political Economy*, chapters v., vii.; Clark, *Philosophy of Wealth*, chap. ii.: *Theory of Distribution*, chapters ix., x.; Böhm-Bawerk, *Positive Theory of Capital*, trans., Bks. I., II.; Pantaleoni, *Pure Economics*, trans., Pt. III., chap. iii., §§ 1, 2; Sidgwick, *Principles of Political Economy*, Bk. I., chap. v.

quire only standing room. Nevertheless, in one degree or another, situation is absolutely necessary to the production of a supply of commodities.

Situation is usually thought of in connection with land. But "land," from one point of view, is too narrow to designate this factor. Productive activity may manifest itself on the water, beneath the surface of the earth or even conceivably in the air. When "land" is used to designate this factor of production, it is found necessary to define the term so as to include these possible places of activity.[1] On the other hand, from another point of view, "land" includes too much. Associated with that term are soil, wood and other natural resources. But these are materials for production and as such they differ from situation in their contribution to production.

43. The efficiency of situation in the process of production depends upon its nearness to the consumer. The nearer a place is to the wants that are to be satisfied, the better it can assist in ministering to those wants. Thus the nearer a wheat-field is to the market, the less is the energy that must be expended in making the wheat available to the consumer. True, situation is not the only factor that affects the efficiency of the process of production. Other considerations may make it preferable to raise wheat a long distance from the consumer rather than utilize a situation that is nearer. The demand for wheat in England may under some circumstances be met better by using the fields of

[1] Marshall, *Principles of Economics*, Vol. I., p. 197.

Dakota than those of England. But when this is the case, it is not because of the distance but in spite of it. Some other advantage, such as superior fertility of the soil or better opportunity of utilizing efficient machinery, or, frequently, the more imperative need of the nearer situation for other purposes, more than offset the disadvantage of distance.

The efficiency of situation, however, is not a mere matter of physical distance. It is rather a question of ease of intercourse between the place of production and the consumer. A mountain range, though but a few miles in width, may interpose more effectual barriers to intercourse than an ocean hundreds of miles broad. Before the building of railroads and the adaptation of steam to transportation, Boston and Albany were further apart from an economic point of view than Boston and Savannah.

Moreover, the importance of a given situation to the process of production will vary, other things being equal, with the number of people it serves and their standard of living, for the larger and more highly developed the population, the more numerous and extensive are the wants to whose satisfaction it may minister. A given acre in a large forest, which serves only as a hunting ground for a small tribe of Indians, may be comparatively unimportant to the process of production, while a few square feet in the heart of a large city, which serves as a distributing center for a large and highly civilized population, may be extremely important to that process.

Situation, though fixed in location, is by no means constant in its efficiency as a factor of production. Variations in population and changes in the facilities for transportation and communication affect the usefulness of any given situation. The increase of population in the western part of the United States has materially increased the economic efficiency of situation in that section. Improved means of transportation are largely responsible for the ability of the Dakota wheat fields, already mentioned, to minister to the world's demand for wheat. On the other hand, the efficiency of some situation has been decreased by migration of population and by improvements in facilities for transportation, which, while rendering new sections desirable and available, have rendered others comparatively useless.

44. A second requisite for production is material out of which wealth can be made. This, as well as situation, is necessary to the production of wealth. This fact is especially apparent in the case of the production of such forms of wealth as food, clothing, fuel and buildings,—commodities so tangible that their material character is at once recognized. But material is equally indispensable in the case of other and less tangible commodities. Even the song and the spoken thought are but air waves which convey impressions to the ear of the listener.[1]

The service rendered by material to the produc-

[1] J. B. Clark, *Philosophy of Wealth*, p. 5.

tion of wealth appears in many different forms, for the nature of the wants seeking satisfaction are numerous and varied. As land, material supplies a foundation upon which men live and carry on their activities and a storehouse within which are contained metals, oil, coal and other useful commodities. As soil, also, it supplies conditions essential to the maintenance and propagation of vegetable life. As water, it affords other conditions essential to life, both vegetable and animal, and, in the form of rivers, lakes and oceans, it facilitates intercourse and supplies a suitable environment for some kinds of animal life. In still another form, material appears as air, which is necessary to life, and constitutes a medium for communicating light and sound. Material in some of its forms affords a food supply and the so-called "raw materials," from which other kinds of wealth may be produced; made into tools, machinery and buildings, it contributes still further to the satisfaction of wants. The various services of this factor of production are, in a general way, indicated by the four classes into which materials are sometimes divided: (1) soil, air and water, (2) subsistence fund, (3) raw materials, and (4) buildings, tools and machinery. This classification, though far from being scientifically precise, serves a useful purpose by way of description. In the ultimate analysis, however, the services of material may be reduced to one: its function is to provide the means for embodying want-attracting power.

From the standpoint of economic science, materials constitute the capital fund of society. This use of the term "capital" should be carefully distinguished from others in popular phrase, where it is employed with a variety of meanings, not wholly different perhaps, but lacking scientific precision. Thus "capital" is sometimes used in speaking of a bank or business enterprise, to denote the original investment, actual or nominal, or the value of the plant. The term is also used to designate the property or assets of an individual or firm, or even as synonymous with an amount loaned for which interest is received. Social capital consists of the materials, in whatever form they may exist, that are available for aiding in the production of wealth.

45. The efficiency of capital in the process of production depends first of all upon the physical excellence of materials and their abundance. The more nourishing the food, the more fertile the soil, the more durable the buildings, tools, and machinery, and the better the quality of the raw materials, the greater is the efficiency of these several forms of capital in the economic process.

The efficiency of capital varies to some extent also according as it is applied to the immediate satisfaction of so-called final desires or is utilized to promote the process of production in other ways. Thus, wood may be consumed as fuel to supply warmth, or it may serve to generate steam in an engine ; it may be used in the erection of a dwelling for immediate comfort and pleasure, or to

build a factory, which will facilitate the production of that which will minister to final desires.

In the primitive conditions of society, material aids to production consisted chiefly of the soil and of such things as nature offers spontaneously to man,—the forest, game, fish, fruit, etc. But man soon learned to adapt the material at his disposal to promote the satisfaction of wants in other ways than by its consumption in the satisfaction of final desires, and there followed the process of saving and capital-building. The result has been such a vast increase in productive efficiency that more and more the energy of society is expended in this way. To-day a large portion of the wealth of society consists of that which is directly intended to aid in future production. This characteristic of modern society affords one of the most striking contrasts with the conditions of primitive times.

There is, it is true, a limit to the profitable application of energy to production in other ways than by the satisfaction of final desires. The store of human energy is maintained by present gratifications of wants, and provision for future production which disregards the necessity of providing the requisite human energy through satisfying present wants, would so far reduce the store of productive energy as to impair the entire process. However, the pressure of wants demanding immediate satisfaction may in general be relied upon to prevent such results. The productive process is far more

liable to injury from too little than from too much saving.

The efficiency of the process of production is influenced also by the relative amounts of circulating and fixed capital. Economic capital is called circulating or fixed according as, in the words of Mill, it "fulfills the whole of its office in the production in which it is engaged, by a single use," or exists in a durable shape, "the return to which is spread over a corresponding duration."[1] This distinction indicates relative rather than absolute conditions, but it is not the less important. Circulating capital appears in the shape of food, fertilizers, raw materials and finished products for immediate consumption; fixed capital consists of soil, buildings, tools and machinery. The greater durability of fixed capital enables it to serve the productive process for a longer period than can circulating capital. This is in many respects an advantage, but it is not to be inferred that economic efficiency is to be promoted by turning all the material possible into fixed capital. Circulating capital is equally important to the economic process. While its service is not so long continued, it cannot be dispensed with. Without it, fixed capital would be useless. Moreover, circulating capital has an advantage as compared with fixed capital in the adaptability of the former to various uses, so that there is less loss to society when changes occur in

[1] *Political Economy*, Bk. I., chap. vi., § 1.

wants, which often tend to render fixed capital comparatively useless.

A definite quantitative statement of the most efficient proportionate distribution of material between these two classes of capital cannot be given. It doubtless varies from time to time. But it is desirable to recognize that disproportionate development of either will impair the productive process.

46. A third requisite for production is found in man's ability to work. This ability in its active state is called labor, and the term "labor" or "labor-power" may be used to designate this factor of production both in its active and in its passive state, though it is seldom necessary to employ it in the latter sense. Analyzed, this factor of production is seen to consist of physical strength and of intelligence. Both of these qualities are necessary to labor, whether in its simplest forms, such as is employed in digging a ditch and in pounding rocks, or in its higher forms, such as appear in the construction of delicate machinery and in the performance of surgical operations.

But though physical strength and intelligence are essential to all labor, these fundamental elements contribute in different degrees to different kinds of labor. This fact is made the basis of a classification of labor as physical and mental according as physical strength or intelligence seems to be most important in any given manifestation of labor. Still another distinction is occasionally made between labor and service, the term labor being

limited to those forms of human activity that are expended upon tangible things and give tangible results, while to other forms the term service is applied. These classifications of labor, like those of capital, though perhaps useful for descriptive purposes, are not scientific. There is no definite dividing line between physical and mental labor nor between labor and service. Both "labor" and service are labor, and all labor is physical and mental.

47. The efficiency of labor-power in the productive process depends upon the conditions requisite for the development and maintenance of strength and intelligence. The most important of these conditions are heredity, nourishment, including environment, and training.

The extent of the influence of heredity upon labor involves the question as to how far the characteristics of a parent are transmitted to its offspring. Scholars whose special province it is to investigate this problem, are not entirely agreed in their conclusions. The weight of opinion, however, favors the theory that both physical and mental characteristics are transmitted by heredity. This conclusion, if correct, has a very important bearing upon the efficiency of the productive capacity of society, through the extent to which the efficiency of any generation may be conditioned by its ancestors, its productive capacity being either maintained and increased as, in the perpetuation of the species, health and strength prevail, or impaired

and perhaps destroyed as disease and weakness predominate.

Of the conditions determining the efficiency of labor, the influence of nourishment is perhaps most immediately perceptible. Of prime importance in this connection is the character and abundance of the supply of food materials. Upon these, existence itself depends. But the labor efficiency which rests upon a food supply sufficient only for bare existence is of an extremely low grade. Up to a certain point, there is a distinct economic gain to society in bettering the food supply of the laborers, for it results in a more than proportional increase of labor-power.[1] Moreover, it is not simply the character and abundance of the food in its raw state that conditions the efficiency of labor. The preparation of food for consumption is also important. Until a comparatively recent date, little, if any, effort was made to secure information as to the relative efficiency of different foods and the best method of preparing them for consumption. And even now little heed is given in practice to the contributions of science to this subject.

Closely akin to food supply is shelter, including housing, clothing and fuel, all of which are important factors in conserving the energy of labor. With these, may be mentioned also climatic and sanitary conditions. If the climate be too cold or too warm, too moist or too dry, the result will be

[1] Walker, *Political Economy*, p. 47.

detrimental to labor-power. These conditions are, however, largely beyond the control of man, except as he may be able to leave unhealthy regions and seek localities more favorable to activity. But in so far as labor is affected by sanitary conditions, the situation is often of man's own making. The vitiating influence of sweat-shops, congested population, poor drainage, filthy streets and similar evils which sap the vitality of man, lies within the power of society to correct. The removal of such abuses is called for, not merely on general humanitarian grounds, but also in order that the present and the future labor-power of society may not suffer serious impairment.

In addition to heredity and nourishment, training is important to the efficiency of labor. Training tends to elevate labor above mere brute force and by the knowledge of how to do, adds to the efficiency of the strength to do. By practice and intelligent instruction, labor becomes habituated to certain modes of activity, thereby facilitating their performance and releasing energy for other activity. Unskilled labor requires superintendence, is wasteful of material and time, and is often incapable of handling the complicated and delicate machinery which contributes so largely to the productivity of modern industry. So essential is skilled labor to efficient industry that society has generally considered it profitable to take special steps to promote the training of laborers. Formerly through apprenticeship laws, a certain time of

preparation and the making of a master-piece were required as conditions for entering many occupations. Modern conditions have led in large measure to the abandonment of the old apprenticeship system, and it was thought for a while that machinery would lessen the need for skilled labor. But the converse has proven true and the end formerly sought by apprenticeship laws is now being realized by the aid of technical schools.

The conditions of efficiency mentioned, affect both the physical strength and the intelligence, the fundamental elements of labor-power. To intelligence as well as to physical strength, a generous endowment of native capacity, proper nourishment and training are essential. To some extent these conditions must be specially adjusted to each of these elements, but the fact of the interdependence of man's physical and intellectual nature, renders it probable that whatever promotes the effectiveness of one will redound to the good of the other.

48. The fourth factor of production is enterprise. It consists in the capacity to put into operation industrial undertakings. It must not be confused with the so-called labor of superintendence, though this form of activity involves enterprise, as indeed do all others in so far as they necessitate independent initiative. In the simplest forms of activity, comparatively little enterprise is needed. To appropriate food which lies ready at hand, requires but little effort, and no one in a normal condition is so wanting in enterprise as to be unable to do this

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much for the satisfaction of his wants. Comparatively speaking, the enterprise required to dig a ditch, to hunt or to fish is as a rule slight. Consequently so long as industrial undertakings were on a small scale, this requisite for production did not assume any marked importance. Indeed, its existence as a distinct factor of production was long unrecognized.

To-day all this is changed. With the development of modern conditions, involving large undertakings, this factor appears both as distinct in kind, because performing a distinct function, and as of prime importance to the economic process. In common phrase it is often referred to as "business ability", and it is readily seen that the ability to establish and operate an extensive railroad system or a manufacturing industry which seeks a world-wide patronage and depends for success upon the accurate estimate of wants in widely separate localities, is of a vastly higher order than the ability necessary to run a local dray or to produce vegetables for one's self or for a local market. Differences in economic status to-day result not so much from differences in opportunities as from differences in the ability to improve opportunity. The great success attained by the leaders of industry is due primarily to their possession of a high grade of enterprise.

49. The determination of the conditions upon which the grade of enterprise and, as a consequence, its efficiency in contributing to the eco-

nomic process, depends, requires first an analysis of man's nature to discover what elements therein constitute the basis of this factor of production. Such an analysis shows that the essential element of enterprise is will power. To possess will power is to possess the requisite energy for action. That which develops the will power gives enterprise. But the will as a characteristic of human nature is dependent upon those conditions that determine human nature,—heredity, nourishment and training, already discussed in connection with labor. In the case of labor, these conditions determine physical strength and intelligence; in the case of enterprise, they determine will power.

But economically effective enterprise requires more than mere strength of will; the moral character is also of great importance. In the economic process many wants press for satisfaction and it becomes necessary to choose at any given time some one want to which attention shall be given. Moreover, there is a difference in the effect of the satisfaction of different wants upon economic efficiency. In the case of some wants, such as the want for alcoholic or other stimulants, satisfaction may work injury to future activity. If their satisfaction undermines the physical strength, impairs the intelligence or weakens the will, the efficiency of labor and enterprise will suffer. And even when the satisfaction of a want is not positively detrimental, if it stands in the way of the satisfaction of a want more conducive to the general good, the result is an impair-

ment of economic efficiency. Thus the preference of present gratification to future gain may mean a less effective application of energy. Furthermore, the satisfaction of some wants may be injurious because inconsistent with the rights of fellow members of society. The right to private property, for example, is economically beneficial because it frees for other purposes energy that, in the absence of such a right, would be required for the defense of one's possessions. Hence to disregard this right and to steal detracts from economic efficiency.

Much, then, of the efficiency of enterprise will depend upon the ability, in the presence of the requisite knowledge and physical strength, to select from two or more possible lines of action, that which is most conducive to welfare. Herein lies the important relation of the moral character of an individual to the economic process. If a man has the necessary labor-power, the extent to which he tries to do honest work will materially affect his economic efficiency. And the extent to which he seeks to do honest work depends directly upon the moral quality of his will power, the basis of his enterprise. The moral element of enterprise, therefore, has an immediate and positive bearing upon economic efficiency.

50. The four factors of production, situation, capital, labor and enterprise, may be called requisites for production, since their coöperation is absolutely necessary to the production of wealth. This fact needs to be emphasized because in the

looseness of much current economic theory the inference is warranted, if the express statement is not made, that though these factors sometimes, perhaps usually, coöperate in the production of wealth, still wealth may be produced by the factors acting independently of each other or at least by the coöperation of two or three of them.[1] Such a view rests upon an incomplete or an inaccurate analysis of the process of production, or it results from the disregard of the service of one or more of the factors in some instances because of its apparent insignificance. It is true that under certain circumstances, the service of a factor in the production of wealth may for practical purposes be overlooked, but for scientific purposes, such service may be ignored only when it is entirely absent.

In many industrial operations, the coöperation of all the factors is apparent. For example, in the manufacture of cloth, the presence of each factor may readily be recognized throughout the entire operation from the growing of the fiber to the weaving of the cloth. But the four factors are as truly necessary for the production of other forms of wealth. Take, for example, the forest tree. The only requisite for its production might seem to be situation and soil. But the tree is not wealth until it possesses want-attracting power. It can possess want-attracting power only when it is known to exist, and even though the finding of the tree be accidental, it involves both labor and enter-

[1] Walker, *Political Economy*, § 121.

prise. Again, there are portions of wealth which may seem to result entirely from labor. Indeed, one class of social reformers, the socialists, base their justification of the proposition to overthrow the existing order of industrial organization upon the claim that all wealth is the result of labor.[1] That labor is essential to the production of all wealth, is undoubtedly true, but a closer look at the process of producing the wealth which is ascribed solely to labor, will show in every instance that labor has had the coöperation of the other factors. The presence of situation will readily be recognized. Capital also will be found in the form of food products and otherwise. Nor is the objection valid that food which is for consumption should not be included in capital. The frequent designation of food as capital only until it comes into the possession of a consumer, involves an arbitrary distinction wholly wanting in logical consistency. Material used to fertilize the soil, it is said, is capital, while material used to nourish the body and maintain its strength is not capital. Such statements are manifestly inconsistent. The erroneous theory that labor, unaided by the other factors, can produce wealth, results in an exaggerated idea of the importance of labor in production. If the theory of the socialists were correct, it would follow that the entrepreneur is a social parasite, and yet labor without enterprise is but potential productive energy.

[1] Schäffle, *Quintessence of Socialism*, p. 26.

Though an analysis of the productive process reveals the necessity of the four factors to the production of wealth, it does not follow that these factors necessarily find manifestation in separate and distinct physical forms. There is never labor in action without enterprise, nor, on the other hand, is enterprise ever active without involving labor.

3

THE ECONOMIC ORGANIZATION

51. The efficiency of production has been greatly increased by the systematic coöperation of industrial agents. Two men with a team and wagon can accomplish more than twice as much in a given time drawing hay, as can one man working alone with a horse and wagon. Ten men engaged in making boxes will produce more if they coöperate systematically than if each man works by himself. The process of securing the satisfaction of wants is less efficient in a community where each family ministers to its own wants entirely than in one where the members coöperate. In general, it may be affirmed as a valid principle, that the output of a given number of productive units coöperating will exceed that of the same number working independently.

Walker, *Political Economy*, §§ 80–85, 408; Ely, *Outlines of Economics*, Bk. II., Pt. I., chapter iii.; Gide, *Political Economy*, trans., Bk. II. Pt. II., chapters i., ii.; Marshall, *Principles of Economics*, Bk. IV., chapters viii.–xii.; Laughlin, *Elements of Political Economy*, chapter vi.; Mill, *Principles of Political Economy*, Bk. I., chapters viii., ix.; Roscher, *Political Economy*, trans., Bk. I., chapter ii.

This systematic coöperation for securing the satisfaction of wants is the economic organization. In many of its forms it is readily recognized. The making of wagons, the weaving of cloth, the sailing of ships, the mining of coal, and, indeed, most industries, require the coöperation of several for their successful operation. The extent to which coöperation is applied depends in part, it is true, upon the character of the industry, for not all industries are equally suited to the application of this condition of economic efficiency. Thus organization of industry in farming is not carried to the same extent as in a factory. But though appearing in different forms and in varying degrees in different industries, the coöperation of the social units for the satisfaction of wants is so general as to be commonly recognized as a distinguishing feature of modern business.

The view of economic organization, however, which sees it only in individual enterprises, falls far short of comprehending the full scope of this feature of the economic process, for the economic organization embraces all efforts for the satisfaction of wants to which more than one individual contributes. The tea grower in Ceylon, the cotton planter in Texas, and the manufacturer of cutlery in England are members of the same economic organization in so far as their efforts contribute to the mutual satisfaction of wants, just as truly as are the manager, engineer, weaver and shipper in a cotton factory. Indeed, the economic organization

is a complex and far-reaching affair, a fact that any one may realize for himself, if he will but consider the extent to which others, some known to him and some unknown, have shared in producing that which he consumes. His clothing, fuel, house, tools, and in fact nearly all or quite all that ministers to him, represent the activity of others as well as of himself. The economic organization of society is coextensive with coöperating human activity.

The beginnings of this organization are as old as society itself. As has been said, the essential characteristic of society is relationship, and wherever relationships exist, there will be found coöperation for want-satisfaction. In primitive times this coöperation was doubtless very limited. It may have included but few human beings, perhaps only the members of a family. They may have coöperated only for the perpetuation of the species and for common defense. But they coöperated, and from their simple beginnings, in the course of time, has developed an ever increasing association, until to-day the economic organization is practically world-wide. And the importance of this world-wide organization of activity is evidenced by the fact that no nation could to-day be shut off from intercourse with other nations without serious impairment of the power of its citizens to satisfy their wants.

52. The economic organization presents two distinctive features: division of function and unification of design. Through the extension of the

scope and efficiency of these, the development of the organization has been realized.

The first and most apparent feature of the economic organization is division of function. This consists in the distribution of the parts of a process among more or less distinct agencies. Thus in making boxes one man may cut the boards into proper lengths, and another may put them together. In harvesting wheat, one man may cut the grain, another may bind it, while a third may gather the bundles, and perhaps a fourth and fifth may attend to hauling them to the thresher. Indeed, if the illustration were extended to include all who share in preparing the grain for consumption as food, there would be added to those mentioned, the miller and the baker, the machinist, the carrier, and those engaged in mining and lumber industries who have aided in providing the machinery, besides numerous others. Many of these operations, in turn, present in themselves an application of division of function upon an extensive scale. One may start with the simplest of modern industrial processes and find involved therein, directly or indirectly, a large amount of division of function.

The beginnings of division of function historically are lost in the uncertainties surrounding the beginnings of society. But as from the first men have utilized the principle of coöperation in seeking the satisfaction of their wants, it is evident that division of function is as old as society itself. The early steps in dividing the economic process

among the members of society were doubtless very simple. They probably did not extend further than the division among them of different occupations. Some hunted, others fished, while others may have made the implements necessary for the chase or for fishing. This elementary form of division of function has sometimes been called "division of occupation" to distinguish it from the more extended application, which is called "division of labor," the former consisting in the differentiation of the economic process into such relatively complete operations as are represented by the occupations of the carpenter, the farmer, the blacksmith, and the weaver, while the latter consists in the further differentiation of such occupations. Though this distinction may be useful in calling attention to differences in the extent to which division of function is applied, as a matter of fact both "division of occupation" and "division of labor" are one in principle.

However crude the early manifestations of division of function may have been, its application today, both in number of persons essential to an operation and in minuteness of subdivision of the processes, has reached a development difficult to appreciate, unless one is in immediate touch with modern business organization. The following are given as "distinct branches of shoemaking at which men, women, and children are kept constantly at work in the most perfect of the modern shoe factories;" "binders, blockers, bootliners, beaters-out,

boot-turners, bottomers, buffers, burnishers, channelers, counter-makers, crimpers, cutters, dressers, edge-setters, eyeleters, finishers, fitters, heelers, lasters, levelers, machine-peggers, McKay-stitchers, nailers, packers, parters, peggers, pressers, rosette-makers, siders, sand-paperers, skinners, stitchers, stringers, treers, trimmers, welters, button-hole makers, clampers, cleckers, closers, corders, embossers, gluers, inner-sole makers, lacers, leather assorters, riveters, rollers, seam-rubbers, shank-pressers, shavers, slipper-liners, sole-leather cutters, sole-quilters, stampers, stiffeners, stock-fitters, strippers, taggers, tip-makers, turners and vampers.''[1] Even the cobbler of a few decades ago would not recognize some of these operations. And this list does not include all the forms of activity essential to a modern shoe factory, much less does it include all those which contribute to the preparation of shoes for the consumer.

53. Though division of function may be the most apparent feature of the economic organization, it is not more important than its complement, unification of design. This consists in the working of the various parts of the process towards a common end. It is not more important that the various functions of an organism should be distributed among special organs, than that those organs should so work together as to promote a common end, the welfare of the organism. So, in the economic organization,

[1] David A. Wells, *Recent Economic Changes*, p. 94, note.

for the efficiency of division of function, it is absolutely necessary that the amount and kind of service performed by each agent should be such as to harmonize with the activities of the others in promoting the common end, the satisfaction of wants. It is not sufficient that one produce food and another clothing. The satisfaction of wants will be retarded rather than promoted as a result of such division of function, unless each adjust his actions to the wants of both.

The question as to how the unification of design can best be attained, whether and to what extent by leaving to each individual the initiative and control of his activity or by giving that initiative and control to society, collectively, is one of the most serious of social problems. The first requisite for solving this problem is an adequate appreciation of the extent to which economic efficiency depends upon unification of design, a fact which calls for the more emphasis because of the degree to which it escapes notice.

In individual undertakings and within limited areas, one can see the importance of working with his fellows to a common plan. If, in making boxes, he who saws the lumber disregards the requirements as to length, or saws too many of one length when others are needed to keep his fellow workmen occupied, it is readily seen that the operation will suffer. So, also, as regards those who work together in a factory, there is little difficulty in realizing the necessity of harmonious coöperation in their

work. But in the far-reaching and complex relations of modern industrial activity, the specific bearing of one man's acts and their ultimate consequences are often quite beyond his powers of comprehension. The cattle herder on a South American ranch can have no adequate conception of the relation of his activity to the wants of those who will ultimately consume the beef and leather from the cattle he is tending. Indeed, the relation in any single instance may be of comparatively slight importance. Still, no act that in any way affects the common end of satisfying wants, can be said to be wholly without importance. And upon harmony of activity depends in large measure the efficiency of the economic process.

54. While economic activity is deliberate in the sense that it is the result of the conscious effort of man to satisfy his wants, the organization of that activity lies in large measure beyond the immediate purpose of which the individual is conscious in seeking the satisfaction of his wants. To some extent, it is true, industry is organized as the result of deliberate intent; that is to say, there are many instances in which the individual sees the necessity of systematic coöperation and seeks to secure it. In harvesting crops, in establishing a cotton factory or a railroad, the individual proceeds to solicit the assistance of others, and deliberately organizes the activity. But of the sum total of organized activity, of which an individual industry is a part, much lies quite beyond the conscious purpose of the indi-

viduals concerned. It results unconsciously from the way in which individuals seek their own good.

Division of function in economic organization results from the tendency of energy to seek the path of least resistance. It is because the satisfaction of wants can be attained with less effort when the process is subdivided, that division of function exists and develops. This tendency leads to the selection of the new and more efficient and to the rejection of the old and less efficient, and to the increase of the fitness of that which survives, a process already described as accomplished through the complementary working of competition and monopolization.

To unification of design, which is the complement of division of function, two conditions are essential. First, an individual must be able to contemplate as a good for himself that which, with or without his knowledge, involves a good to others. In the second place, so many as are necessary to the performance of that which involves a common good, must see the possibility of good to themselves in the same direction, *i. e.*, in action which harmonizes. Two men meeting on the highway illustrate these conditions, when each turns out to the right in order that he may pass the other. To this end it is necessary that each should be capable of seeing a possible benefit to himself by turning to one side, an act which involves a benefit to both. In addition to this, both must see the possibility of benefit in the same way, *i. e.*, by turning to the

right or to the left. Otherwise, though recognizing the desirability of turning out, they will collide. Simple as this act may be, it involves all the elements that are the basis of unification of design throughout society. In the case supposed, the common nature of the good may be apparent to those concerned, though it may never enter their thoughts as such; while in other instances, where the parties are widely separated, each may contemplate only his own good. But whether harmony of action is conscious or unconscious, it is due to the fact that men possess by nature the capacity to conceive of a common good and to act for that good.[1]

55. Three important advantages result from the economic organization: (1) it makes possible certain undertakings; (2) it promotes the development of productive agencies of a higher grade of efficiency; and (3) it facilitates the more economical application of energy by existing agencies.

The organization of activity brings within the range of possibility some undertakings that would otherwise be impossible of accomplishment, for many things are beyond the power of an individual working alone, because their performance requires the immediate application of more energy than he possesses. This advantage becomes especially significant in the presence of the stupendous under-

[1] Cf. Thomas Hill Green, *Lectures on the Principles of Political Obligation*, reprinted from his *Philosophical Works*, vol. ii., p. 121 et seq.

takings of modern business, in transportation, mining and elsewhere. Success in such enterprises as the Suez or Nicaragua canals, the Trans-Siberian and Trans-Continental railroads, the Niagara Falls power plant, and other similar industries, is impossible without systematic coöperation, if for no other reason than because they are too large for one man.

But this benefit from organization is not limited to operations of such size. If in the transfer of a pile of stones from one place to another, some are found that are too heavy for one man to lift, the performance of the task becomes possible only by the coöperation of others. Moreover, the coöperation even in so slight a matter must be systematic. The efforts must be applied simultaneously and in the requisite direction. Few, indeed, are the industries that are to-day unaffected by this advantage of organization.

56. Again, organization promotes the development of a higher grade of productive agencies. This appears especially in connection with skill and the invention of labor-saving devices. The mere fact that a man limits the range of his activities and concentrates his attention upon a few operations tends to sharpen his faculties and to increase his skill within the narrower field. A man makes a better blacksmith when he is not obliged to divide his attention between blacksmithing and farming, carpentering and other vocations. The sculptor attains a higher grade of skill in his profession

when not compelled to combine with it the various other forms of activity that are essential to the satisfaction of his wants.

Furthermore, the limitation of the field of activity quickens the inventive genius of man and results in the introduction of better tools and machinery and in the discovery of new possibilities in the material at his disposal. One of the distinguishing features of the present system of manufactures is the extent to which labor-saving machinery is employed. The modern printing press, for example, is a marvel of human ingenuity. Instead of the old hand machine, there is now a power press into which blank paper is fed and out of which there comes a complete newspaper, printed, cut, pasted and folded, ready for delivery. Years ago the making of pins was a laborious process. By the close of the eighteenth century, ten men could make 48,000 pins in a day, and this was considered a wonderful triumph of improved machinery. Now three men with the aid of machinery can produce 7,500,000 pins in a day.[1] Many mechanical devices now in common use seem almost human in the complexity of their operations and more than human in the perfection of their results.

57. Organization not only leads to the development of better agencies for production, but it also makes possible a more economical application of existing

[1] David A. Wells, *Recent Economic Changes*, p. 59. Read Chapter 2.

agencies. This advantage appears, in one form, in a more extensive utilization of special facilities. Thus, one may have a special aptitude for mechanics, another for farming, another for art and another for planning and controlling industries. Organization enables society to profit by these special aptitudes and thereby lessens the necessity of expending energy on that for which one is but little fitted. A similar advantage accrues also in connection with communities and nations, which differ both in natural resources and in development. Thus, one section may possess iron and coal, another may be especially suited to cotton-growing and another to the production of breadstuffs. Climatic and other conditions result in wide differences in facilities for production. Tropical vegetation is unlike that of the temperate zone, and both differ from that of the extreme north or south. Furthermore, nations exist in different stages of economic development. Some are especially suited for the production of raw materials, others for manufacturing those materials into products for final consumption. All these differences redound to the advantage of society through organization of industry, which makes possible the satisfaction of wants from those sources of supply that are best adapted thereto.

Another form in which this advantage appears is in the saving of material and labor, especially in connection with the concentration of industries into large establishments, one of the most characteristic features of modern business. Many things that in

small, isolated establishments are discarded as waste, not only failing to add to, but actually detracting from, the efficiency of production, become useful in large industries. When the preparation of meat for the market was in the hands of small producers, the hoofs, entrails, horns and even the hair and bones were commonly thrown away. But with the modern methods of large packing establishments, means of utilizing this waste have been found to such an extent, it is said, that there is now absolutely no portion of the animal which does not contribute some useful commodity. Many other industries, notably the refining of oil, afford similar evidence of the gain to society in economic efficiency through the saving of material.

Labor, too, is often saved as a result of organization, thereby releasing energy for other operations. Sometimes this gain appears in the shortening of the time between the beginning and the completion of a commodity. More often, perhaps, it is effected through a decrease in the average time required to produce a commodity. Because of the number and complexity of the different operations, it may be that the actual time between the beginning and the completion of a given pair of boots is sometimes longer under modern methods, but, considering the large number of boots simultaneously in course of production, when the average time required for making a pair is computed, there will be found an immense saving as compared with the old methods. This advantage of economic or-

ganization appears also in a saving in the time requisite for learning an occupation, *i. e.*, in shortening the term of apprenticeship. Society gains as a result of this, through the increase in the number of productive years in the lives of its members.

The saving of labor appears also in the fact that the organization of industry often enables the same results to be obtained with fewer laborers. Thus it may require but little more expenditure of energy to superintend 100 men than 50, provided they are assembled in the same establishment or under the same control; and the result is a gain to society. This result of organization is seen frequently in connection with the consolidation of railroads, whereby the necessity of duplicating general officers is obviated. Another illustration of a similar nature is found in the consolidation of different manufacturing establishments, thereby saving labor through the decrease in number both of superintendents and salesmen.

Though the advantages of organization appear in various forms, they may be reduced to one. They consist in the more efficient application of energy to the process of want-satisfaction. Division of function contributes to this end by the substitution of more for less efficient agencies. But to realize the possible advantages of these improved agencies, there must be harmony in their activity, a unification of design in their working. The service of this unification of design to the economic process may be described as consisting in the de-

crease of friction, whereby energy that would otherwise be wasted, is usefully applied.

58. The advantages resulting from the organization of activity may be offset to some extent by certain disadvantages, for the organization is susceptible to certain disorders which tend to lessen its efficiency and give rise to serious problems. The very fact that machinery is more complex renders necessary greater care that it does not get out of order. Loss to the process of satisfying wants is especially liable from two causes inseparable from the association of men for economic ends. In the first place, there is danger that the dependence among the productive units may become so disproportionate as to result in injury to the process, and, in the second place, there is a possibility that a failure to adjust the supply of commodities to the demand therefor, may lead to waste through what is commonly designated "overproduction." A consideration of these possible disorders will throw further light upon the nature of the economic organization and its relation to the economic process.

Division of function results in making the units dependent upon each other. When a man ceases to pursue the entire process of making clothing, confining himself exclusively to producing wool or to spinning yarn or to weaving cloth or to cutting, sewing and finishing garments, he becomes to some extent dependent upon others for his clothing. When a nation ceases to supply all that is necessary to finished products, confining itself to

manufacturing or to the production of raw materials and relying upon others for that which it does not produce, it becomes to some extent dependent upon other nations for the satisfaction of wants.

Dependence is not, however, necessarily an evil. It is absolutely inseparable from all progress and, when the development is healthy, there results increased efficiency and a higher civilization. But there is a possibility of evil in the relation of dependence, a possibility which becomes a reality when the proper balance is not preserved.

Excessive dependence may be due to the fact that the process of division of function is carried so far as to diminish the capacity of an individual, undermine his health, stunt his mind and distort his development, both mental and physical. Such a result is most likely to be seen where the process assigned to an individual is a simple, mechanical one, requiring endless repetition without variation throughout long hours. The resulting decrease in vigor of mind and body is itself an evil. It indicates a defeat of the economic process. But this is not the only significance of excessive dependence. It impairs the process of production by reducing the efficiency of those subjected to such dependence. This effect becomes especially apparent when, as often happens, a change in industry takes place. Then the laborer, who was perhaps skilled in one kind of occupation, finds his training no longer in demand, and if he is unfitted for other

forms of work, he loses employment and sinks to a low state of economic efficiency.

Or, again, disproportionate dependence may follow from the results of the distribution of wealth. Division of function necessitates the division of the product among the producers, and the conditions of distribution may be such as to injure the process of production. In the process of distribution there is a tendency for product to go to the strong, as a consequence of which the stronger may become more strong and the weaker, more weak. If this promotes the survival of the fittest, it may not in the end be a misfortune, but the immediate consequences are often deplorable, and the extent to which remedies are provided for these evils is one of the vital tests of the adequacy of any industrial system.

59. A second evil incident to economic organization is overproduction. By this is not meant that more wealth is produced than can be consumed, but that there may at times be more of a commodity produced than suffices to meet the effective demand for it, *i. e.*, the demand that is willing to pay the cost of producing it. When this happens, it is an indication of loss, for it means that the power of want-attraction which has been produced is not equal to that which has been expended. That this is a matter of common occurrence is shown by the frequency with which "bargain sales" are instituted to dispose of accumulations for which no effective demand exists. Such losses may, however, be so

slight as to cause no serious derangement of the industrial machinery. But when overproduction takes place on a large scale, it becomes a serious menace to the efficiency of the economic process.

The possibility of over-production emphasizes two important characteristics of the productive process: (1) it is not a purely spontaneous process in the sense that it proceeds independent of man's judgment, hence, (2) the process becomes increasingly speculative as the organization becomes more complex. The further division of function is carried, the less each individual produces directly for himself and the present. In producing for others and the future, one is compelled to form an estimate of the nature and amount of commodities that will be required by others. He cannot consult his own and the immediate demand only. Certain commodities minister to wants which are so universal and persistent that there is never wanting some demand for them, but even in the case of these, which may be called "staple" commodities, the supply and, to some extent, the demand vary from year to year, so that judgment as to what shall be produced cannot even here be dispensed with. With other classes of commodities which serve wants peculiar to certain seasons, waste and loss of efficiency is the more sure to result from a disregard of the varying character and extent of demand. The more susceptible wants are to fluctuation, the greater is the necessity for care in adapting supply to demand.

As an inevitable consequence of the production

for others and the future, the element of speculation is introduced into the economic process. The same progress in division of function that increases the necessity for judgment in production, intensifies the uncertainty of the result, thereby rendering activity increasingly speculative. In like manner, variation in wants, which makes necessary a careful estimate of future demand, increases the speculative character of industry. Speculation is, then, never absent from economic activity where the coöperation of members of society is involved.

Moreover, speculation is not without its advantages, since it compels the exercise of judgment and contributes to the development of a higher order of business ability. Furthermore, in influencing men to look out for the future as well as for the present, there is a tendency to equalize economic conditions, thereby lessening the evil effects of such temporary emergencies as are caused by failure of harvests. But the possibility of gain, which accompanies the existence of speculation, sometimes leads to deliberate effort to make uncertainties in order that one may profit at the expense of another. The consequence of this may be a serious disturbance of business, the correction of which is rendered the more difficult by the fact that it is not easy to distinguish the speculation that is necessary and beneficial from that which is injurious.

4

THE INCENTIVE TO ACTIVITY

60. In addition to the factors of production and the economic organization, the character of the inducement to put forth effort exerts an important influence upon the process of production. As has been said, the fundamental reason for activity is want. But the mere existence of a desire is not of itself sufficient to lead even to activity, much less to the most efficient activity. Besides the want, there must appear to the individual a direct relation between his act and the satisfaction of his want. He must believe, on the one hand, that if he puts forth effort, he can attain his end; and, on the other hand, that if he does not exert himself, he will suffer a disadvantage. In brief, to the efficiency of the productive process it is essential that there should be a prospect (1) that gain will result from action and (2) that loss will result from inaction.

While there is doubtless much difference between the motives to action, some men being impelled by a desire for larger growth and others seeking only the necessities of life, still, whatever be the specific motive, there would be little, if any, activity but

for the expectation of profiting by the result. Moreover, it is not sufficient for efficient production that as the result of effort there should be a prospect that somebody's want will be satisfied, there must be a prospect of the satisfaction of the wants of him who sets the process going. It is true that activity is often found where the outlook for success seems well-nigh hopeless, but even here there will be found a belief that in the mere fact of activity itself is some prospect of reward,—more at least than in idleness.

On the other hand, it requires only a superficial consideration of society to see that the economic process suffers from the inactivity of those whose circumstances lead them to think that their wants will be supplied without much activity on their part. In the possession of an income which the efforts of others and the institutions of society have provided and unmoved by ambitions for higher development, they contribute but little to economic efficiency, because of the lack of an incentive to act.

61. Assuming the existence of wants, the conditions which determine the incentives to activity are found largely in the character of the individual and in the rights established by society.

The incentive essential to secure efficient action is not the same for all persons. Differences inherent in human nature ascribable to temperament and other elements of character, result in varying degrees of natural hopefulness. Some men are confident of success where others foresee only failure,

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for no other reason than that the former naturally give greater emphasis to the favorable side of things than do the latter.

Especially important in this connection is religious faith, which influences economic efficiency not only by conditioning the character of the wants whose satisfaction is sought, but also by increasing the readiness to act. He who believes that an overruling Providence controls the affairs of men, not merely watching over the general trend of human affairs, but concerned also with the interest of individuals, rewarding faithfulness, feels less need of seeing the end from the beginning, than does one who is devoid of such a faith. And though hopefulness exaggerated may become rashness, and faith misapplied may lead to inaction, thereby lessening the efficiency of the economic process, both elements of character are important factors in influencing to healthy activity. To ignore them is to omit from the analysis of the economic process some of its most important phenomena.

62. The incentive to activity depends also upon rights. A right is society's recognition of freedom to act to an end, a recognition involving both permission to do and protection in doing. Thus the right to life, the right to property and the right to free movement rest upon society's approval of the individual's claim to freedom to live, to own and to move. Rights have not always been the same. They have been established according to the conditions existing at different times and in different

places. But always and everywhere their development has had this distinctive characteristic: they have been established according to society's conception of the need of the individual for freedom of action. Their recognition has brought within the reach of the individual greater prospect of reward and has thereby given a greater incentive to activity.

Nor is this view inconsistent with the fact that society's method of establishing rights is often by denial to individuals of the right to do certain things. Thus, society may establish the right to live by condemning and punishing murder; it may establish the right to property by forbidding stealing. But in all such cases, the real significance of society's decrees is not the limitation but the enlargement of freedom. By preventing one man from committing murder or robbery, it enhances the freedom of a hundred who, as a result of those decrees, can the more freely act for the satisfaction of their wants. Where life and property are safe, men are no longer obliged to devote a large portion of their energy to supplying for themselves the means of protection. To that extent energy is released for other purposes. Moreover, this guarantee of protection vastly increases the incentive to act by increasing the prospect that one may enjoy the fruits of his efforts.

63. The importance of rights to the process of satisfying wants will be more clearly seen by an examination of two that bear an especially close relation to the prospect of reward, viz.: the right to

own and the right to contract. The right to own is, next to the right to live, the most important guaranteed to the individual by society, because, while the latter aims to insure existence, the former aims to make development possible. Indeed, the right to live in itself involves the right to own, at least to the extent of controlling the food without which life would cease. True, society, in establishing the right to live, does not recognize the right of every individual under all conditions to appropriate whatever is necessary to his life, but as a social institution there must exist, to some extent, the right to own or men would disappear and society would cease to exist. This is, however, considering the right to own from the standpoint of absolute necessity only, and had mere existence been the end sought, the right to property would have come far short of its present scope. Viewed in its relation to production, the right to own is a fundamental and omnipresent condition of efficiency. That as a result of one's efforts there should be ownership in the means to satisfy wants, is an indispensable requisite to progress. Both man's immediate efforts and his disposition to save for the future, one of the fundamental requisites for capital building, are dependent upon property rights.

Of the rights to property, the right to own one's self comes first in importance. Though slavery and serfdom, at some time in the development of society, may have suited the requirements for

economic efficiency, they are to-day recognized by all the most advanced nations as utterly incompatible with a high grade of industry. He who has not property in himself cannot be expected to be interested in doing all that he can in the best possible way. If one knows that even his supply of life's necessities is at the arbitrary disposal of a master and that no matter how efficient he may be, his reward is wholly at the pleasure of some one else, the incentive to act is of the lowest order. As has been said of the slavery system, the individual under it has "no rights," "no property in product," and his "pay is determined by animal wants," hence he has "no interest in the quantity or quality of the work done nor in the care of materials." [1] Whenever, under slavery, there exists a higher grade of efficiency than is needed to maintain life and escape punishment, it will be found due to affection or to a sense of duty, traits of human character which even slavery cannot wholly eradicate. So far as rights are concerned, the right to own one's self is the first condition of efficient activity.

But society has not stopped with establishing the right to property in one's self. It has added to this the right to property in the means for satisfying wants, a right that has varied in its comprehensiveness from time to time according as society has viewed the needs of efficient activity. In very

[1] Henry C. Adams, *Outline of Lectures upon Political Economy*, p. 12.

early times, it is not improbable that the individual's right to property was limited to what is known as personal property, which then consisted mainly of the implements of the chase and formed a comparatively small part of the entire wealth of society. It is not difficult to see how these limits to private property were essential at that time to economic efficiency. The principal commodities sought for the satisfaction of wants were wild animals and fish. As these had no fixed habitations, to have limited fishing or hunting grounds for each individual to certain definite areas of water or land would have rendered existence even more precarious than it was. On the other hand, the principal incentive to the manufacture of good bows and arrows, canoes and tents, was the knowledge that as the property of the maker they would contribute to his welfare.

In time, the growth of society necessitated the cultivation of land and with this came a limitation of common ownership, looking towards private property in land. In the system that prevailed in the Middle Ages, though common rights still existed in connection with land, they were so far limited as to entitle the cultivator to a definite quantity of land. And though this did not involve permanent possession of definite pieces of land, still the control of such definite portions was vested in the cultivator until he secured his crop. Later, it became necessary to fertilize the soil and otherwise to add improvements of a relatively permanent nature,

and as the benefits from these improvements could not be realized adequately in one season, longer control was necessary in order to supply the requisite incentive. Finally, private property in land was established as a right. Though other factors doubtless entered into the development of private property in land, those here given illustrate its general character. Indeed, fraud and even force may have been features of the actual process of development, but the final establishment of the right to private property in land was due to the fact that society recognized private ownership as more efficient than common ownership because there resulted greater incentive to high grade cultivation.

Two other property rights bear an especially close relation to the incentive to activity, the patent-right and the copyright, in the establishment of which society has expressly sought to offer inducements to efficient effort. The patent-right seeks to insure to the inventor control over the supply of his invention, which might otherwise be lost through the greater ability of others to produce it after they had secured the plan. The copyright seeks to secure a similar advantage to the author. The marvelous development of inventions and their vital relation to industry have been mentioned. Though, as has been pointed out,[1] the economic organization supplies conditions favorable to the development of ability to invent, it may be consid-

[1] § 56.

ered certain that few of the great inventions which are revolutionizing economic methods would have been made, but for the guarantee by society of property rights in such products. Nor is the truth of this altered by the fact that in many instances the reward for an invention has not been reaped by the inventor. The hope of such reward existed because of patent-rights, and this gave the necessary incentive to act.

A similar incentive to activity is found in the copyright, but for the existence of which, many of the ablest minds the world has seen would have been unable to devote their energies to literature, in which case society would have suffered irrevocable loss. Nor is it in the realm of mere culture alone that the copyright aids production. The general progress of economic efficiency has been due in no small degree to the contributions of science. These contributions appear not only in the form of apparatus and processes that can be patented, but also in the form of scientific treatises, property in which is insured by the copyright. Fundamentally, however, there is little difference between the so-called patent-right and the copyright. Both seek to encourage activity by increasing the prospect of reward through property rights in the result.

64. It is not, however, to be inferred, from the existence of private property rights, that the right of control resulting is absolute and unlimited. Property rights are the creation of society and it

rests with society to establish such limitations as it may deem best. Moreover, such limitations are by no means rare. They are found in connection with the management of railroads, in the exercise of the right of eminent domain and in many other forms. Even where the legal title to the ownership of railroads is vested in private persons, society insists upon imposing such restrictions upon private control and even upon exercising such oversight as in its opinion public good demands. These restrictions upon private control are substantially limitations of property rights, for from the standpoint of its essential character, if not in a technical legal sense, the right to own is the right to control.

The fundamental reason for limitations upon private property rights lies in the fact that it is quite within the possibilities that private property should at times so obstruct activity as to diminish economic efficiency. Thus the institution of the right of eminent domain, whereby society reserves to itself the right to appropriate certain forms of private property for public use, rests upon the fundamental fact that individual choice as to the use of property may conflict with society's conception of public good. In order that this limitation to individual control may not work a disadvantage to society, the right to compensation for property taken for public use is generally, though not always, recognized. But the fact that the amount of such compensation, as well as the appropriation of the property itself, are not left to the decision of the owner, makes the right

of eminent domain an important limitation to the right of private property.

To appreciate the power of evil in unrestricted private ownership and control, one needs but to picture the conditions that would exist in the absence of this right of eminent domain. There is no more important requisite for economic efficiency than freedom of movement. Freedom of movement, however, requires not only the absence of legal restrictions upon such movement but also routes along which the individual may move. It is impossible to estimate the importance of highways to society or the impediment to activity that would result from leaving their existence and location to the will of the private owner.

Moreover, society's restrictions upon private property rights are not limited to such quasi-public undertakings as railroads, nor to the actual diversion of property from private to public use. In forbidding a man to erect a slaughter-house at will within a city's limits, in requiring of factory owners suitable fire-escapes and guards for dangerous machinery and in other similar restrictions, society limits private control of property. Such limitations, though they may not affect the legal title, are in substance limitations of private property rights, for these, as has been said, are, philosophically speaking, rights of control.

In various forms, a desire to limit still further the rights to private property is manifested. The most extensive of the schemes proposed is that

of the socialists, who would make all the facilities for production, except labor, public property. In a more moderate form, the same desire appears in the plan of the single tax advocates, who would make land public property. Others propose public ownership of railroads and municipal monopolies, such as water-works and lighting plants. These schemes cannot consistently be condemned merely on the ground that they involve limitations of private property rights, for unlimited private property rights do not now exist. In deciding the merits of these and similar propositions, the matter of chief concern is the resulting effect upon the incentive to activity in its relation to the efficiency of the industry involved and to the economic process in general. For the limitations of private property rights, if carried too far, would diminish the efficiency of production (1) by lessening the incentive that comes from hope of gain and leads to intense effort; and (2) by substituting for hope of reward for one's efforts, hope of reward without effort or out of proportion to effort. Such results are fatal to economic progress because they destroy the requisites therefor. However desirable a fair distribution of products may be, there must first be products to divide, and efforts to secure a fair distribution which lessen the efficiency of production, may defeat their own end.

65. A second right referred to as vitally related to economic efficiency is the right to contract. The right to contract involves freedom to enter into

agreements and the assurance that the power of society can be relied upon to secure their performance. Agreements between members of society are the direct outcome of division of function, as a result of which men produce less for themselves directly and for the present, and more for others and the future. Under such conditions, agreements as to future performance are a prerequisite for present action. But the individual unaided can with difficulty compel the fulfillment of obligations. The weak would be at the mercy of the strong, were it not for the superior power of society which can be invoked when necessary. Wherever one's prospect of reward depends at all upon the obligations of others, an adequate incentive to act cannot rest merely upon the willingness of the others to do their part. Moreover, under the existing order of things, there are few instances in which one's efforts to satisfy his wants do not depend in some degree upon others for their success. Society's recognition and enforcement of contracts tend to insure to the laborer the returns agreed upon for his services; they make possible the flow of capital through loans to the place where it can be most efficiently used; and, as an accompanying result, they enable the collection and more efficient utilization of small savings, thus diminishing loss through waste.

The importance of contracts to production is enhanced by the extent to which under modern economic conditions, the owners of the factors of produc-

tion do not come into immediate control of the product. When the owners of capital, situation and labor are not themselves managers of an undertaking, they must rely upon others for their returns from the industry. The finished product comes into the immediate control of the proprietor of the industry and contracts are necessary to insure its proper distribution. In a shoe factory, for example, the plant, raw materials and labor may be owned by others than the proprietor. His ability to obtain the use of these factors will depend in no small degree upon contract, for the finished shoes come into his immediate possession, and however honest he may be, the owners of the factors will expect an agreement, enforceable at law, before allowing the use of their property. The conditions are further complicated by the fact that the finished product is often not suited for the payment of the owners of the factors of production. The owners of the plant, of the materials and of the labor do not want their pay in shoes. The proprietor is expected to sell the shoes upon the market and to pay his obligations in a medium of exchange. In every step of the process, contracts enter, and their status is an important condition of efficiency.

The close relation of contracts to economic efficiency is seen also in connection with the use of credit in the process of buying and selling. The development and usefulness of division of function require an exchange of commodities, and to facilitate exchange it has been found necessary to em-

ploy credit. Indeed, the vast majority of business transactions are conducted without the actual transfer of money. At the very foundation of credit is the inviolability of contracts. Not sentiment, nor personal friendship, but legally enforceable agreements are the basis of business credit, and no highly developed credit system can be found where the institution of contract is not well established.

So important does society regard the matter of contracts, that it often allows an obligation to be implied in the absence of express agreement. Thus, "if a person continues to receive a paper or periodical sent through the post-office, he is liable for the subscription price."[1] His acceptance of the paper implies an agreement to pay for it. It is held also that a "common carrier intrusted with goods impliedly promises to carry and deliver them safely."[2] It is stated as a general rule, that "a promise will be implied or created by law where equity or good conscience require one, even though none were especially made." Ample warrant for society's concern as to contracts is found in their vital relation to that prospect of reward which is essential to efficient activity.

Society places limitations upon the right to contract, as it does upon property rights, because of the evils which might otherwise result. It is to the interest of society that both parties to a contract should be as free as possible, or at least

[1] Lawson, *Contracts*. Sec. 43. [2] Ibid., Sec. 49.

that neither should be under any other compulsion than such as makes for his good. Hence in a large number of instances, undue influence is held to be sufficient ground for invalidating a contract.[1] Thus a contract whereby an employee releases his employer from liability in case of injury is often held to be void. Furthermore, many contracts in restraint of trade, though freely entered into by the parties, are declared illegal because considered to be against public interest.[2] As a general principle, society no longer enforces the actual fulfillment of contracts involving personal performance, for such a policy would be too akin to slavery to be consistent with society's good. In all these cases, as with property rights, the demands of economic efficiency will be found upon analysis, to be a determining factor in settling the limits to the right to contract.

66. Closely akin to the right to contract but so important as to justify special consideration, are the rights through which society seeks to increase the incentive to activity by directly limiting liability to loss. With the progress of society, the individual tends more and more to share with others the control of the conditions of his success. This, as has been seen, is a direct result of division of function and leads to the dependence of members of society upon each other. Under these conditions,

[1] Lawson, *Contracts*, Sec. 259 et seq.

[2] Ibid., Sec. 324 et seq. An excellent statement of the social status of contracts can be found in this treatise.

there is a tendency to seek the increase of the prospect of reward by guaranteeing the individual against the full consequences of his failure to succeed, thereby diffusing responsibility. Thus society authorizes associations in which the liability of each member of the organization is limited, usually to some proportion of his share therein.

Limited liability is one of the prominent features of joint-stock companies and corporations.[1] In these companies the management is placed in the hands of agents, who may or may not be part owners, and upon their judgment the success or failure of the undertaking largely depends. In many cases the risk involved is so great that the industry would not be undertaken if each one joining therein were to be held liable for the entire loss in case of failure. But men are willing to share in such associations, even though not personally in control of their conduct, because of the possible advantage in case of success and of the limited liability to loss in case of failure. This form of business organization, originally necessitated by the exigencies of large undertakings, has proven so advantageous to the participants, that many small establishments have reorganized as stock companies.

The advantages to society of such a method of organization are very great and should not be lost sight of in the presence of the evils to which

[1] The term "corporation" strictly speaking includes municipalities and many religious and social organizations as well as those established for business purposes.

it is susceptible. Corporations enable society to profit by the superior possibilities of large business enterprises without the loss in incentive to act which would result, were all industries that are too large for a single individual, to be placed in charge of the state. But corporate organization in fostering large industries promotes concentration of power of control and hence may be lead to the evil possibilities of monopolization. And, in establishing the right to engage in business with a limited liability as to the consequences of one's acts, society owes it to itself to guard against the abuse of this privilege. In some respects this is one of the most pressing of social problems. Many of the evils ascribed to monopolization are due to defective corporation laws. But in correcting these evils, great care should be taken not to allow a rash judgment as to the results of corporate organization to obscure the important advantages accruing to society therefrom.

Somewhat similar to the limited liability of corporations, in that it limits one's liability to suffer the complete consequences of failure, is the institution of old age pensions. Under modern economic conditions many men are compelled to rely solely upon their own labor to secure the satisfaction of wants, as a result of which, members of this class at times fail to make adequate provision for old age. It is believed by some that this failure is not primarily the fault of the persons concerned but is due in part to modern industrial organization.

This belief has led to the establishment, in some countries, of old age pensions for the workingmen, which, by a guarantee against future need, tend to relieve workingmen from undue anxiety. In their relation to the incentive to activity, these pensions are in substance attempts to avoid loss of efficiency through despair. Fear of loss is but the opposite of hope of gain, and however they may differ in their effects upon individuals, their results agree in in this: that excessive hope of reward which becomes rashness, and excessive fear of loss which becomes despair, are alike injurious to the productive process.

As social problems, the detailed discussion of corporations and pensions lies outside the scope of the present investigation. Nor do the rights of property, of contract, of corporate organization and of pensions, exhaust the social institutions which affect economic efficiency. They may, however, be considered sufficient to illustrate and emphasize the close connection between the legal institutions of society and the incentive to activity which is essential to efficient production.

5

THE DEVELOPMENT OF DEMAND

67. The first requisite for economic demand is population,[1] and except when the increase in population so far exceeds the increase in commodities as to lower the standard of living, it may be said that the larger the population the more effective is the demand for commodities. The extent of population depends primarily upon the procreative capacity of the race, a question that is physiological in character. But a high birth-rate does not necessarily result in a numerous population. The tendency of population to increase as a result of births is in some measure offset by its decrease through deaths. And though death is certain for all human beings, its influence is increased by the numerous causes which prevent many from attaining what may be called a normal age. Only a small proportion of men die as the result of the natural decay of physical energy through old age. Disease, accident, war, pestilence and crime, in a multitude of

[1] Throughout this discussion of demand, the existence of commodities is assumed.

forms, shorten the normal period of life and tend to depopulation.

The fact of the necessity of a large population to a high grade of economic progress, both as affording the necessary labor power and enterprise and also as supplying that variety and extent of demand without which the scope and efficiency of activity must remain limited, has been obscured by the emphasis given, since the time of Malthus, to the possible evils of over-population. Malthus pointed out the fact that: "There resides in nearly all races and tribes of men, a strong, urgent, persistent disposition to carry the increase of population beyond the limits of adequate subsistence."[1] It is, of course, impossible that population should continue to increase faster than subsistence, because without adequate subsistence, the death-rate would offset the birth-rate. But it is conceivable that population should increase to the limit of bare subsistence, in which case mankind would be constantly on the verge of starvation. This question of the possibility of over-population and the prope remedy therefor belongs to the discussion of social problems. It has, however, an important bearing upon the present inquiry, in that it suggests the fact that the efficiency of demand depends not merely upon the number of people but also upon their standard of living.

68. The standard of living attained by a people

[1] Walker, *Political Economy*, p. 313.

is conditioned by the extent and character of the development of wants. The fundamental characteristic of the development of wants is the fact that new wants arise through the satisfaction of existing wants. Wants satisfied beget other wants, or better, perhaps, wants satisfied enable other wants relatively less intense to assert themselves. The process of development is from the general to the particular. First there exists a general want, perhaps unexpressed, either unsatisfied or capable of better satisfaction; then a commodity is found which will meet the want, after which the want turns to the specific object and there results economic demand. To illustrate in the case of cotton-seed, already mentioned, there existed first the general want for a better food supply; then it was found that cotton-seed would meet this want, and the want turned to the specific object; there arose a demand for cotton-seed and its products. A similar illustration is found in the case of the tomato, which now contributes so extensively to the food supply. Formerly this ministered only to a limited aesthetic demand. It was cultivated as a garden ornament. But it became known that it was good to eat, and a portion of that general demand for a better food supply, which is always pressing for satisfaction, became centered upon tomatoes.

It should be noted also that a vital relation exists between effort and the development of wants. By this is meant not merely that effort is necessary

to secure that which will satisfy wants and hence to the development of new wants, but that to some extent effort is a direct cause of the development of wants, and is, therefore, economically useful in and of itself. A condition in which wants could be satisfied without effort is as undesirable as it is impossible.

The relation between effort and development can be described only in general terms and is not susceptible of quantitative determination. It is subject to great variations, because it is dependent upon a variety of conditions. It is not to be inferred that, because some effort is desirable, therefore the greater the effort necessary to the satisfaction of wants, the better. Too great effort means exhaustion. But it would be equally erroneous to affirm that the less the effort the better, for too little effort means stagnation. It is not an accident that the highest development has been attained in the temperate rather than in the torrid zone where nature is so generous that the necessities of life require only to be appropriated, or in the frigid zone where the conditions are so hard that it requires nearly all of one's effort to maintain existence. Nor does the fact that so much activity in industry is devoted to decreasing the cost of production disprove the statement that effort is in itself to some extent useful. Whatever may be the specific motive of him who seeks to make the conditions of satisfying wants easier, the result of the attainment of this end is not idleness. In its rela-

tion to the economic process, the attempt to decrease the cost of production is not an effort to attain rest, but rather a striving to save energy in one direction that it may be available in some other, *i. e.*, it is struggle for higher development.

Wants develop, then, through the satisfaction of wants, *i. e.*, through consumption. But not all wants sustain the same relation to efficiency of demand. It is not merely the general fact of want-development but the kind of want-development also that conditions demand. An analysis of the character of wants is necessary, then, to determine the relation of consumption to demand. The subject of inquiry here presented has usually been ignored in the investigation of economic principles, on the ground that it pertains only to the domain of the moralist or the sociologist. Because the satisfaction of wants is the end of activity, it seems not to be sufficiently recognized that this end becomes also a means, hence the satisfaction of wants must itself be taken into account in determining the conditions of economic efficiency.

Furthermore, it is too often assumed that the nature of demand itself need not be taken into consideration, and that the economist should concern himself only with an analysis of the way in which demand is met. This is, however, to ignore an important phase of the economic process and to leave the resulting presentation of principles incomplete. It should be observed also that though the investigation here

approaches the domain of ethics, the point of view is different. It is not proposed to inquire into the right and wrong of different wants, but into their varying effect upon economic efficiency in so far as that depends upon demand. The ethicist may hold that this determines the right or wrong character of wants and of the resulting activity, *i. e.*, that whatever ministers to human development is right and that whatever retards it, is wrong. With this, however, the economist, in so far as he seeks fundamental economic principles, is not concerned. For with him the sole question in this connection is, how do wants affect the efficiency of demand.

69. The chief characteristics of wants that condition their influence upon demand are (1) persistence, (2) expansibility and (3) healthfulness. The more persistent wants are, the more effective is the resulting demand, unless some other characteristic renders them destructive. For the greater the persistence of wants, the more effective are they in impelling to action for their satisfaction, and the more certain is it that the supply adapted to the wants and the adjustment of economic forces for the production of that supply, will continue effective. This is the characteristic popularly called "steadiness." A steady demand diminishes the uncertanties of business, decreases the speculative character of undertakings, and limits the field of the unscrupulous member of society.

The recognition of the fact that wants vary in the degree of their persistence is reflected in the

popular classification of commodities as necessities, comforts and luxuries. It is impossible to draw hard and fast lines between commodities on this basis of classification, but it corresponds in general with the fact that some wants are in the highest degree persistent, because suffering and death result, if they remain unsatisfied; others are less persistent, because their satisfaction is only a matter of convenience; while others are still less persistent because concerned only with pleasure. But suffering, convenience and pleasure, like necessities, comforts and luxuries, are purely relative. That which ministers to the convenience of one, may prevent positive suffering in another; while that which is merely a matter of pleasure to one, is often essential to the convenience of another.

The persistence of wants depends largely upon the physical nature of individuals and upon habit. Some things minister to the continuance of physical existence; these are necessities in the strictest use of the term. The demand for such commodities is fundamental and is found in all stages of development. Under existing conditions, it is the most potent influence impelling to activity. In some instances, it alone prevents absolute idleness. But where these wants only are found, the standard of living is of the lowest sort. Above it are standards of all grades up to the highest, which must continue to move still higher, if civilization is to continue to advance.

These standards and the persistence of the accom-

panying wants are largely influenced by habit. The want which appears at first incidentally and apparently, it may be, by accident, once gratified, recurs to seek new satisfaction. At each new recurrence, there is a tendency to increased persistence until a habit is formed and an element in the standard of living becomes fixed.

70. A second characteristic of wants that influences demand, is expansibility. Taking wants as a whole, it may be said that their capacity for development is indefinitely great. This is a result of the nature of man, and its bearing upon the economic process is very significant. It forbids a contemplation of the time when, even though population should no longer increase, a fixed condition of want-development will be attained. The complete and final satisfaction of wants is impossible even though the supply of commodities available at a given time sufficed to meet all the wants then active. Certain wants recur at more or less frequent intervals, as in the case of the wants for food, clothing and fuel. Hence, though these were completely satisfied at a given time, such satisfaction would not be final. But, not only do certain wants require repeated satisfaction, it is also true that new wants are constantly appearing. And judging from experience, the conclusion is warranted that there is no end to the capacity of mankind to develop wants. In other words, it can never be predicated that existing wants can be no better satisfied and that no new wants can appear. The

expansibility of wants makes for the efficiency of demand.

Not all wants, however, are alike in their expansibility, and in this fact, as well as in the varying persistence of wants, is a cause of difference in the effect of wants upon demand. The fact of differences in the expansibility of wants has not, as a rule, been considered of sufficient significance to be recognized in economic discussions. This is due not only to a belief that demand can and will take care of itself, but also to the concentration of attention in matters pertaining to economics, upon the physical wants and the commodities ministering thereto. In general, the physical wants, though more persistent, are less expansible than the non-physical or, as they may be termed, spiritual wants. The want for food, in so far as it arises from the requirements for maintaining life, does not vary greatly in amount for each individual from age to age. The want for clothing, fuel and shelter, in so far as those commodities are necessary as a preventive of physical suffering, has increased to some extent because of changed habits of life; certain forms of activity lessen the hardiness of the body and increase the requirements for protection from cold. In the main, however, the large possibilities of development are found in the domain of the spiritual wants, such as the desire for esteem, knowledge, power and the beautiful. These are the wants whose expansibility leads to the great increase in demand. Even where the increase in demand calls for more elaborate and expensive food,

it is chiefly due to the addition of the spiritual to the physical element of wants. Where an individual spends large sums of money upon clothing, it is due not so much to a desire for warmth as to a desire to conform to style and to satisfy an aesthetic taste. The same is true of the demand for elaborate and expensive dwellings.

The greater persistence of physical wants and the greater expansibility of those wants which may be said to arise out of man's spiritual nature, are illustrated by an investigation of actual expenditures among certain classes of society in Prussia. Though this inquiry did not include those whose incomes exceeded $1,100 a year, thus omitting those whose expenditures would show the greatest development of spiritual wants, the results are important in their general bearing upon the question of the development of wants. The expenditures were grouped in eight classes, viz., (1) subsistence, (2) clothing, (3) lodging, (4) firing and lighting, (5) education, public worship, etc., (6) legal protection, (7) care of health and (8) comfort, mental and bodily recreation. A comparison was made of expenditures for these several classes of commodities under three classes of income, viz., (1) $225–$300, (2) $450–$600 and (3) $750–$1,100. The results showed that the expenditures for the first four classes of commodities, which include those in which the physical wants are most prominent, were 95%, 90% and 85% for each of the three grades of income respectively, leaving for the

second four classes of items, where the influence of the spiritual wants is more marked, 5%, 10% and 15% for each of the three grades of income. If it were possible to distinguish between the purely physical and the spiritual wants represented in the increase of expenditures for subsistence, clothing, lodging, firing and lighting, in the case of the larger incomes, there is little doubt that the increase in relative expansibility of spiritual wants would be found much greater than appears from the figures given.[1]

71. The third characteristic of wants mentioned as influencing the efficiency of demand is heathfulness. A want is healthful from the standpoint of economics when it is of such a wholesome character that its satisfaction conduces to the maintenance of human energy and to the further growth of healthful wants. Some wants call for that which kills; others for that which nourishes and promotes development in ever increasing measure. From the side of their healthfulness, wants may be distinguished according as they require for their satisfaction food or poison, considering these terms to apply to spiritual as well as to physical wants. For example, from an economic standpoint, the want for nourishing food promotes economic efficiency, not only by increasing man's efficiency as a laborer or entrepreneur, but also by contributing to the efficiency of demand through its effect upon the fur-

[1] Massachusetts Bureau of Labor, Report for 1885. Reprint edition, p. 250.

ther development of wants. On the other hand, the want for stimulants, except when concerned with a temporary emergency, is economically detrimental in two ways;—it undermines man's energy, thereby decreasing his effectiveness for producing commodities, and it obstructs the growth of healthy wants, thereby retarding the development of an efficient demand. A want may be both persistent and expansible, but if its satisfaction is unhealthful, its ultimate effect is to diminish economic efficiency.

72. A further condition affecting the development of wants is found in the relation of interdependence existing between certain classes of wants, so that, even though the germs of all wants may exist in the lowest stage of human development, it is not a matter of indifference, which wants first receive attention. It has been seen that physical wants, though less expansible than spiritual, are relatively more persistent. It is also true that the physical wants are first in order of development, and that their satisfaction is the first requisite for the development of the spiritual wants. This fact may well receive attention in view of the frequent efforts at social reform directed immediately towards man's spiritual nature, when the physical wants are still very inadequately met. It is a fundamental economic truth that until at least the necessities of life are provided, spiritual wants can find but little opportunity for development. On the other hand, it is equally true that the physical wants may be so satisfied as to obstruct the growth of spiritual wants.

Both exhausting struggle for physical existence and excessive gratification of physical appetite tend to smother the higher wants.

73. In so far, then, as demand involves the existence of wants, the efficiency of the process of producing demand depends upon the degree to which existing wants are satisfied, the character of the wants satisfied and the order in which they are satisfied. Economic demand, however, requires not only the existence of general wants but also the concentration of those wants upon specific commodities, for only then does want-attracting power result. This concentration of wants upon commodities, depends (1) upon a knowledge of the existence and character of commodities and (2) upon a prospect of success in the effort to secure them.

The effort to obtain a knowledge of the character of commodities is an important feature of business activity. Scientific investigation is readily recognized as a prominent and essential feature of industry. Its importance to economic progress is not questioned. In many industries, experts are constantly employed whose sole duty it is to investigate the qualities and possibilities of material in order to determine its adaptability to certain purposes. The results of such investigations determine largely the demand for those commodities.

Another phase of the process of concentrating general wants upon specific commodities is commonly called advertising. Evidences of this form of activity are omnipresent. By displays in

show-windows, by elaborately prepared and profusely illustrated descriptions in newspapers, magazines, circulars and other special publications, by expositions or fairs, by special agents, by signs and a multitude of other devices, human ingenuity exerts itself to the utmost to attract the attention of the consumer and secure his demand.

Advertising has usually received the attention of the student of social phenomena, if at all, only to be condemned as a useless expenditure of energy. It is sometimes urged as an argument in favor of substituting government for individual initiative and control, that the former would render advertising unnecessary and thereby save to society the energy now expended upon it. According to this view, advertising is simply a device to draw demand from one source of supply to another. As such, it is conceived to be of advantage only to this or that individual, according as one succeeds in diverting trade to himself, so that, inasmuch as what the successful advertiser gains another loses, the net result to society is the loss of energy expended in advertising. Few views on economic subjects involve more serious error.

It is doubtless true in the matter of advertising, as in all other phases of the economic process, that there is loss because of misdirected energy. But the results of advertising do not consist merely or necessarily in promoting the interests of one individual at the expense of another. Advertising is a means whereby general wants, which would other-

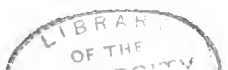
wise remain general, are crystallized into specific wants for particular commodities. Furthermore, advertising not only conveys a knowledge of where and how things that are wanted, may be obtained; it tends also to develop a demand which did not before exist, for one often wants something as a result of knowing that it can be obtained. In all this, it performs an immense service to society. Indeed, the service of advertising is one that, in the modern highly developed organization, is absolutely indispensable to economic efficiency.

Nor is the effect of advertising in diverting trade from one party to another, necessarily an evil. In doing this, it may be promoting the survival of the fittest and thereby contributing to economic progress. Society will undoubtedly gain in economic efficiency by improvements which will enable the results of advertising to be attained with less expenditure of energy, just as it profits by improved machinery or training, or by any other change which increases the effectiveness of its applications of energy. But to condemn advertising as a waste of energy merely because the future may see less expensive methods employed, is as illogical as to declare that the old hand printing-press was a useless contrivance because it has been found possible to substitute for it a more economical machine. The loss of energy which, in the absence of advertising, would result through the continued use of relatively inefficient methods, far surpasses the entire expenditure of energy therefor. To appreciate its impor-

tance one needs only to contemplate the condition that would result if this feature of the economic process did not exist. The high grade of modern economic efficiency consists not only in the existence of superior methods of producing a supply but also in the fact that men want this supply. The average man of the twentieth century surpasses the average man of any previous age not less truly in his capacity to demand than in his capacity to supply. To this, all agencies for discovering and disseminating knowledge contribute.

74. Finally, for that concentration of wants upon specific commodities which is essential to economic demand, there must exist the prospect of success in the effort to secure the commodities. For economic demand does not include all the wants that individuals might have for specific commodities; it is limited to those wants which actually seek satisfaction. Under a simple form of organization, where the steps in the process of satisfying wants lie within the control of a single individual, the prospect of success in the attempt to satisfy wants depends merely upon the individual's possession of the necessary factors of production. The farmer can satisfy his want for food to the extent that he has the proper facilities for producing food and knows how to use them and is willing to make the requisite exertion. In other words, under these conditions, the ability to produce commodities and the ability to gratify wants are one and the same.

With the introduction of division of function,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however, an individual and his possessions constitute but a part of the requisites for success in the effort to satisfy wants. Under such conditions, one's own efforts minister in part to his wants and in part to the wants of others; while others, in like manner, contribute to their wants and to his. In such a state of interdependence, one's prospect of success in the attempt to satisfy his wants and, therefore, his effective demand, depend not only upon what he produces, but also upon what others produce and upon what they demand. In the first instance, the individual uses the means at his disposal to produce a supply of commodities, more or less with a view to meeting the wants of others. This, his contribution to supply, is at the same time a factor in his ability to secure the products of others, *i. e.*, in his effective demand for what others have produced for themselves and for him. The baker's bread, the miner's coal, the weaver's cloth and the cobbler's shoes are for each his supply and at the same time a condition of his effective demand. But the product of each is but one factor in his effective demand, for the demand of each is effective only when he has found some one who in turn demands his commodity. The miner is hungry and has a general want for food. He learns that bread will satisfy this want and that a supply of bread is in the possession of the baker. The conditions of effective demand are met in part. There exists a general want and it has been specialized in so far as that requires a knowledge both that bread will sat-

isfy the want and where bread can be found. But there is still something lacking. The miner offers his coal to the baker and finds that it meets the latter's want for fuel, and then there exists in the full economic sense a demand for bread. In like manner, starting from the baker with his general want for fuel directed towards coal, and his supply of bread in excess of his own final want therefor, which the miner desires, there can be traced an economic demand for coal.

The extensive use of a medium of exchange, which brings the consumer into relation with a middleman instead of with the original producers of commodities, obscures the interdependence of supply and demand. But a complete analysis of economic relations shows not only that a man's purchasing power is a necessary element in his demand, but that his purchasing power depends both upon his ability to produce something and also upon the adaptability of that which he produces to the wants of others and upon their demand for it. In no phase of the economic process is the mutuality of relations and the absolute necessity of unification of design to economic efficiency, more apparent.

Moreover, to the extent that, through the development of division of function, ownership in the means for producing a complete commodity is no longer centered in one individual but is divided among several, one's effective demand is dependent also upon the distribution of wealth. For under such conditions, one's ability to purchase depends

upon what he receives in return for the services rendered by his factor or factors in the production of wealth. In the analysis of the economic process, it was found[1] that when men coöperate for the production of wealth, its distribution among the parties thereto is essential to the realization of the end of that process. But distribution is important not only because it is essential to the final satisfaction of wants, but also because it affects the efficiency of production, for upon the distribution of commodities depend the possessions of the individual and these influence the production both of supply and of demand. An efficient system of distribution is indispensable to efficient production.

[1] § 36.

PART III

DISTRIBUTION

1

DISTRIBUTION

75. Distribution, as a feature of the economic process, is concerned with the sharing of wealth by the members of society. The process of distribution, as popularly understood, includes the transportation of commodities from place to place until they reach the final consumer, as when cotton grown in South Carolina is shipped to England, manufactured into cloth, and then sent perhaps to China, where it is consumed. From the stand-point of economic theory, however, the transportation of commodities is a part of the process of production, which consists in getting commodities not only into the form but also into the place in which they are wanted. Distribution, on the other hand, is concerned with the amount of wealth that accrues to the various members of society.

Distribution or the sharing of products arises from economic organization, in which, because

Walker, *Political Economy*, § 244 et seq.; Gide, *Political Economy*, trans., Bk. IV.; Laughlin, *Elements of Political Economy*, chapter xvi.; Ely, *Outlines of Economics*, Bk. II., Pt. III., chapter i.; Clark, *The Distribution of Wealth*.

of division of function, the satisfaction of the wants of each calls for some of the commodities produced by others. Thus, when one man is a carpenter, another a farmer, another a tailor, and so on, it becomes necessary to share the results of the activities of each. Otherwise the satisfaction of wants would be hindered instead of promoted by division of function. If it were possible for each to produce all that the satisfaction of his wants required, there would be no sharing of products among the members of society. It is, then, due to the existence of coöperation among men that it becomes necessary to distribute the output of the process of production. It belongs to distribution as a part of economic theory to describe the process of dividing the product and to discover and formulate the principles according to which the amounts of wealth which the various members of society receive, are determined.

76. Certain conditions combine to give special importance to this feature of the economic process. An individual seeking to maintain life and to attain a higher development seeks that which will satisfy his wants, through which alone existence and progress are possible. To this end it does not suffice merely that a large amount of commodities should be produced. The satisfaction of one's wants depends upon the amount that he can apply to his own use. But, as a result of human nature, in which the capacity of want-development is indefinitely great, there are always some wants unsatisfied. Man is

always seeking more; and success in this effort depends upon one's ability to secure a larger portion in the distribution of wealth, which may or may not be accompanied by a larger production of wealth.

It is characteristic of much of the means for satisfying wants that its utilization by one involves its non-utilization by others. It is true that in a large number of instances, too often overlooked as of no importance to the economist or ignored as being outside the scope of economic investigation, wants are of such a character that the use of commodities to minister to one person interferes but little, if at all, with their use by others. To satisfy some of the aesthetic desires, one needs but to see or to hear. A beautiful picture or a song can minister to the wants of many at the same time. The wants to which the Sistine Madonna or Central Park ministers, are not necessarily less fully satisfied because others are being served in like manner. On the other hand, many wants are preëminently exclusive, *i. e.*, the commodities that minister to them can serve only one or a few persons. Examples of these are found in nearly all of the commodities that are required by the wants which arise from the physical nature of man, such as the want for food, for clothing and fuel. If a loaf of bread ministers to the hunger of one, it cannot minister to the same want in another. In this class, should be included also that most expansive and exclusive of all wants, the desire for private ownership. If the Sistine Madonna satisfied some one's want for it

merely to call it his own, its sphere of service might be very much narrowed.

Commonplace as the facts of the expansibility of wants and the exclusiveness of many, are, they deserve consideration, for they are potent causes of rivalry of interests among members of society. And rivalry of interests leads to serious problems. Indeed, most of the controversies that disturb society are traceable directly to one or both of these causes. The social problems are largely problems of distribution. Herein may be found the principal occasion of the problems of labor, socialism, money, banks, railroads, tariffs and trusts, as well as of others. And upon a correct understanding of the fundamental principles of distribution depends in large measure one's equipment for solving these problems.

77. The system of distribution prevailing at any time is the result of social choice. That is to say, it is not an arrangement existing by virtue of certain physical laws independent of social will and regardless of the demand of social needs, but is the result of society's judgment, *i. e.*, it is a method of dividing the output of the productive process among the members of society, which is established by society, presumably because the particular system adopted is deemed best suited to promote the general welfare.

From the nature of the system of distribution as a creation of society, it follows that, in common with all other social institutions, it is subject to

change. Moreover, it may be accepted as inevitable that the system will be changed, whenever society believes that some other than the existing one will give a better distribution of its wealth. The essential nature of society compels it to seek the best method it can devise for satisfying its wants, and it is in accord with this principle that a new system or a modification of the old will follow inevitably when society is convinced that better want-satisfaction will result from such change.

This fact should have a practical bearing in influencing the attitude of men toward propositions for modifying the existing methods of distribution. The tendency is very strong to accept the existing order, especially when one's immediate interests appear to be promoted by it, as of necessity permanent. This leads to a placid acquiescence in the bad as well as in the good in existing conditions with an attitude of helpless submission to the decrees of blind fate. The ultimate result of such a policy may be such a congestion of evils as finally to destroy the barriers of conservatism and by the very impetuosity of radicalism, to lead to a new horde of evils. For it is the teaching of history that social institutions, so far from being permanent, are in a continual state of readjustment, and that to the extent that such readjustment is retarded beyond what is necessary to insure the utility of prospective changes, serious disorders follow. The histories of England and of France afford ample illustration of the differ-

ence between the results of social evolution and of social revolution. Experience teaches also that an individual may retard but can not prevent social readjustment, and the French Revolution stands as a permanent demonstration of the dangers involved in the undue postponement of the readjustment of social institutions to meet changes in social needs.

But, though the system of distribution is a social institution and, therefore, subject to change, it is not, on the other hand, a mere arbitrary creation. It is a development. It follows, then, that attempts to improve upon the existing order can succeed only when made with a due regard for the principles of development. This fact also has an important bearing upon the solution of the problems arising out of distribution. It has been said that an individual may retard but he can not prevent social changes. It is equally true that an individual may hasten a change but he cannot achieve an improvement in social conditions by that change merely because he intends an improvement. Progress does not necessarily follow change, and the methods by which alone progress can be attained are not determined by the wishes of would-be reformers. Though men are in some degree free to choose whatever system of distribution they will, they can not escape the consequences of their choice. If a policy is adopted that is out of harmony with the conditions essential to progress, it will be self-defeating. Thus, since the system of distribution sustains a vital relation to the process of production,

especially in its influence upon the incentive to activity, which so largely conditions productive efficiency, and since the first requisite for distribution is something to distribute, if a method of distribution be adopted which impairs the efficiency of production, it will defeat the very end of distribution by destroying the source from which the fund to be distributed is derived.

2

THE BASIS OF DISTRIBUTION

78. The fundamental characteristic of a system of distribution is the basis which serves as a criterion for determining the amount of product to which the parties to the distribution are entitled. In case men coöperate in some undertaking, they must adopt a basis for dividing the result thereof. For example, if several coöperate to raise a crop of corn, they must settle upon some basis of division. They may agree that each shall have the product raised on a definitely specified portion of land, or that each shall have a certain portion of the yield as measured in bushels, or that each shall receive a certain portion of the returns from the sale of the crop, or that the division shall be made in some other way. But some basis of division must be applied. Moreover, it is not a matter of

Clark, *The Distribution of Wealth*, pp. 1–9, 36–51, et al.; Pantaleoni, *Pure Economics*, trans., Pt. III., chapter i.; Gide, *Political Economy*, trans., Bk. IV., Pt. I., chapter ii.; Sidgwick, *Principles of Political Economy*, Bk. II., chapter i.; note also the basis of distribution involved in the theories of Walker, Ely, Mill and Laughlin.

indifference to the parties concerned, what basis of distribution is agreed upon. Some plans are more in accord with the sense of justice than others. Thus the method of dividing on the basis of the yield of specific portions of the land, though easily applied, is apt to be unsatisfactory, since it fails to take proper account of differences in the fertility of different parts of the soil. This method was largely employed in the old manorial system of mediaeval times, where for a given season each member of the community, serf and lord, was entitled to the yield from a definite portion of land. The disadvantages arising from inequalities in the fertility of the soil were in a measure offset by dividing the entire area to be cultivated into small strips and assigning these to the members of the manor in such a way that each man's holding consisted of small sections lying in different parts of the estate. Occasional redistribution of these strips tended to lessen still further the inequalities arising trom differences in fertility. But at best this method was open to criticism from the standpoint of justice, and with the development of permanent tenure in land-holding, it became entirely inapplicable.

But however widely methods of distribution may differ in the character of their basic principle, all must have a basis, for it is indispensable to coöperation in the process of satisfying wants. Hence, society, which involves coöperation on the most extensive scale, in establishing the principles of human association, adopts certain bases according to

which its members shall share in the benefits accruing from such coöperation. The method of establishing these bases is through the creation of rights. To discover the basis of distribution in society, then, it is necessary to consider the rights established, in their relation to the sharing in the wealth produced.

79. The economic test of the sufficiency of a basis of distribution is its effect upon the process of satisfying wants, for a system of distribution, in like manner with all other phases of the economic process, must be approved or condemned according as it promotes or impedes the attainment of the end of that process. Thus in primitive times, the basis of distribution was to a considerable extent, physical strength. So far as this prevailed, a man was considered entitled to what he could get and keep. But such a system of distribution involved a large expenditure of energy for the protection of one's possessions, and in time more peaceful methods were substituted, through the widening of the scope of property and contract rights. The gain resulting from the accompanying saving of energy showed itself in an increased economic efficiency. But though different bases of distribution may suit different times and places, the ultimate test is the same. Does the system most efficiently promote the satisfaction of wants or is another system or some modification of the existing system, better suited to that end?

80. Theoretically speaking, the bases of distri-

bution which might be adopted are numerous. Four only, however, require consideration. These may be designated (1) equality, (2) need, (3) production and (4) value of services.

Distribution on the basis of equality gives to the members of society equal shares of product. It is advocated by some who assert that all men are equal and are therefore entitled to equal portions of wealth. In actual practice, however, this theory finds but little application. It may, perhaps, be said to prevail in the distribution of rations among soldiers, in the allowances to inmates of penitentiaries and in the distribution of estates among heirs, in so far as the law provides for equal shares. But as a general basis on which to distribute the large fund of wealth among the members of society, it receives but little support. The reason is not difficult to discover. The basis is totally incompatible with efficient production, as it seriously impairs the incentive to activity. An adequate incentive to activity requires that the prospect of reward should be seen in immediate relation to action. Distribution on the basis of equality would not only encourage rashness, by giving to him who fails the same reward as to him who succeeds, but it would also develop idleness, by giving to him who does not even try to produce, the same as to him who does. This basis is condemned alike by the test of economic sufficiency and by the general sense of justice among men, which accepts the doctrine that reaping should follow sowing.

81. The system of distribution on the basis of need, is suggested by its designation. It calls for the sharing of wealth by members of society according to their several needs rather than according to their several performances. Wants, not services, are taken as the basis of the right to share. Though not the prevailing principle of distribution, as society is now organized, it finds a limited application. The attempt is made to distribute charity on this basis, and it appears in substance wherever one is allowed to appropriate wealth to his own use without a compensation graded accordingly. Thus the post-office charges a fixed amount for carrying a letter of a given size, and then conveys it a long or a short distance according to the desire of the sender. A similar policy prevails in the street-car service wherever a fixed charge is made regardless of whether the passenger rides one block or many. This basis finds application also in the case of public streets, parks and schools, where the use allowed to the individual bears no relation to the size of his contribution thereto.

But wherever this basis is applied, the reason therefor lies not so much, if at all, in consideration for the specific individual benefited, as in the requirement of the good of society as a whole, or of whatever agency is responsible for the adoption of the system. Not the right of the individual to be supported but the necessity of protecting society from the evils of pauperism, is the economic reason for charity; not the advantage to this or that indi-

vidual from parks or public schools, but the public good that is promoted by healthy, intelligent citizens, is the economic reason for public parks and public schools; not the obligation to the sender of a letter or to a passenger on a street-car, but the greater advantage to society or to the transportation company, is the economic reason for fixed charges and indefinite services in the post-office and street-railway.

Though advocated for general adoption by some, who propose that society shall exact "from every one according to his ability" and give "to every one according to his need," distribution according to need is limited by two serious obstacles. In the first place, as in the case of equal distribution, the distribution of product according to need, regardless of service, is opposed to a fundamental requisite for efficient production. So long as the reward which alone can give an adequate incentive to activity, involves private ownership and use of the results of activity, a scheme which proposes to distribute according to need, thus rewarding not only the weak and inefficient, but also the unwilling and indolent, cannot be otherwise than self-defeating, through its destructive effect upon production. Its inevitable tendency to perpetuate unfitness at the expense of fitness strikes at the very foundation of progress.

A second obstacle to the application of this basis arises from the fact that wants exceed the means for satisfying them. In so far as the satis-

faction of the wants of one does not involve the impairment of the satisfaction of the wants of another, distribution according to need can be accomplished by leaving each to appropriate the means of want-satisfaction as he wishes. The larger number using the mail and street-cars under the present system makes it the most economic for for society. Within wide limits, the freedom of one to enjoy the advantages of public parks and public schools, not only does not interfere with the satisfaction of the wants of others, but actually increases their want-satisfaction, because it improves the quality of their associates.

But in the presence of wants in excess of means for satisfying them, it cannot be left to each to appropriate according as he desires. The result would be a struggle so intense that many would be exterminated and society would be turned back towards the primitive condition of savagery. When the means for satisfying wants are inadequate for the satisfaction of all wants, distribution on the basis of need could be proportionate only. Its application would result not in giving to each *all* that he needs, but in dividing the supply of commodities among the members of society *in proportion* to their needs. This would necessitate an estimate of needs and of supply, and the apportionment of the latter to the former.

Needs are purely subjective phenomena, until they appear as wants for specific commodities. It is impossible to measure them except as they reveal

their relative intensity through individual choice, whereby one thing is preferred to another. Any other method of measuring needs would be purely arbitrary, the result of the judgment of some one other than the person having the need, in which case there would be absolutely no assurance that the resulting distribution would be proportionate to needs, and the ultimate effect would be nothing less than the surrender of personal freedom. But distribution according to needs which are measured by an individual's choice between commodities, where the supply of commodities is inadequate to satisfy all wants, can be applied only by requiring one to give in return for what he receives and by allotting commodities to those who will give most for them; and from this there results, not distribution on the basis of needs, as that is understood by its advocates, but distribution on the basis of value, and this, as will be seen later, is the method prevailing under the present industrial organization.

An analysis, then, of the nature and requirements of distribution according to needs shows, on the one hand, that its application is possible only when that which is to be distributed is of such a nature that its appropriation by one will not lessen the satisfaction of the wants of others. For only under such conditions can the principle work spontaneously, by leaving each free to appropriate as he wishes, thereby avoiding the necessity of an arbitrary apportionment of product among members of society, an alternative which is itself

incompatible with the system. The analysis shows, on the other hand, that the principle of distribution according to needs, even if possible, is feasible only when conditions are such that it can be applied without endangering the efficiency of production through its tendency to impair the incentive to activity.

Under these circumstances, it is, to say the least, extremely doubtful whether conditions can ever exist which will justify anything like a general adoption of this basis as the predominent method of dividing product. There are, however, some reasons for believing that the basis may attain a much wider application than it does at present. The most serious obstacle to its working is the prevalence of exclusive wants. And though present business methods do not seem to afford much ground for anticipating a large predominence of non-exclusive wants, in the near future, their spread is more extensive and rapid than a casual view reveals. The growing tendency of men of wealth to endow public institutions and the disposition of municipalities to undertake the establishment of parks and other enterprises, the enjoyment of which may be appropriated freely, are essentially an increase in the application of distribution according to need. Moreover, it is by no means impossible that when the progress of discovery in the realm of the physical world shall have further lightened the burden of maintaining existence, and when a higher intelligence shall control men's views of life, a far wider

field for the operation of this basis will be opened. The desire for private ownership, which is now the mainspring of economic activity, and is preëminently an exclusive want, may then yield its supremacy as an incentive to activity, to a desire for spiritual growth. Under such conditions, greater community of participation in the means for satisfying wants will be possible and will be desired by the members of society. Even here, however, the application of the basis will be possible only in the case of such means for satisfying wants as can, without injury to society, be thrown open to appropriation by men either without direct return therefor, or with a return that is not adjusted in size to the amount received.

82. A third basis proposed for distribution is that wealth shall be apportioned among the members of society according to the amount contributed by each to the production of wealth. This is sometimes called distribution according to service, but such a designation of this basis should be qualified by adding that the service is to be determined by measuring the *amount* of each one's contribution to production. But the question arises, how is one's contribution to production to be determined? Some answer, by ascertaining the amount of labor expended, on the ground that wealth is the product solely of labor. But there are few, if any, more fallacious propositions than that which holds that wealth is due to labor alone. Labor, unaided by the other factors of production, is absolutely help-

less and can produce no wealth. Even if enterprise be considered an element of labor, it still remains true that labor without capital and situation is as helpless in the production of wealth, as are capital and situation without labor. To distribute on the basis of contribution to production, it is necessary to ascertain the amount contributed by each of the factors, in order that the owners thereof may receive in proportion thereto.

It is sometimes assumed that the contribution of the several factors can be determined by ascertaining the difference between the amounts produced before and after the addition of a unit of each to the productive operation. Thus, if, after adding ten laborers to the force engaged in manufacturing shoes, the output is increased by ten pairs of shoes, it is inferred that ten pairs of shoes represent what the ten men have produced. The conclusion seems plausible, but it is fallacious. Suppose five men attempt to lift an iron rail but find that they cannot accomplish it. Two more men are added and the rail is lifted. The method of determining the contribution to production described, would be compelled to assign to the two men last added the entire credit for lifting the rail, since this represents the difference between what was accomplished before and after the addition of the two men. The fallacy is here apparent. The addition of the two men increased the efficiency of the entire process. The same is true of the addition of the ten men to the shoe factory. While it is possible to

measure the total efficiency of the productive operation, and the increase in total efficiency which follows the application of additional amounts of one or more of the factors, it is impossible to measure the amount actually produced by any one factor or by any unit of a factor.

Moreover, the production of wealth does not consist merely in the production of a supply of commodities; it consists in the production of value. And for value there must be both supply and demand. Even if it were possible, then, to measure the contribution of a factor to the production of supply, this would not give the contribution of that factor to the production of value, for the same contribution to the production of supply will give different values under different conditions of demand for that supply. Thus, the same contribution to the production of wheat which at one time gave 1,000 bushels, each worth $1.00, may at another time give 1,000 bushels which by reason of increased demand for wheat will be worth $1.50 per bushel. To whom will this increased value go? That depends upon the relation of the supply of and the demand for the several factors. If, for example, the supply of situation is more limited relative to the demand for it than is the case with the other factors, the increase in value will tend to go to the owner of situation, not because situation has contributed more to the production of the value of the wheat, but because the value of the services of situation has increased.

83. Under the existing industrial organization, the shares of members of society are determined, with few exceptions, by the value of the services of one or more of the factors of production owned by them. To the extent that the factors employed in any productive operation are owned by one man, the value of their services is determined indirectly through the sale of the commodity produced. Thus the share of the weaver who owns his plant and raw materials, weaves the cloth and places it on the market as his own, is determined through the sale of that product. But in so far as differentiation in the ownership of the factors has resulted in their employment for production by others than their immediate owners, the value of the services of the factors and the shares received therefor are determined through the sale of the services themselves. Thus the shares received by the owners of situation, capital and labor, when those factors are utilized for production by the entrepreneur, are determined by the sale of the services of those factors. To understand the system of distribution, then, it is necessary to ascertain the principles which operate in the process of buying and selling.

3

EXCHANGE

84. The distribution of product among members of society is accomplished largely through the operation of buying and selling. Individuals produce for others as well as for themselves, in the expectation that by selling their own products they can secure some of that which is produced by others. On this plan the share of each member of society, where division of function exists, consists of that portion of his product, if any, which he retains for his own use, and

Walker, *Political Economy*, Pt. III., chapters i., iii.; Laughlin, *Elements of Political Economy*, Bk. II.; Gide, *Political Economy*, trans., Bk. II., Pt. II., chapter iii.; Pantaleoni, *Pure Economics*, trans., Pt. II.; Ely, *Outlines of Economics*, Bk. II., Pt. II., chapters ii.–v.; *Monopolies and Trusts*, chapters iii., iv.; Jenks, *The Trust Problem;* Von Wieser, *Natural Value*, trans., Bk. II.; Böhm-Bawerk, *Positive Theory of Capital*, trans., Bk. IV.; Roscher, *Political Economy*, trans., Bk. II., chapter ii.; Mill, *Principles of Political Economy*, Bk. III.; Sidgwick, *Principles of Political Economy*, Bk. II., chapters ii., x.; Marshall, *Principles of Economics*, Bk, V.; Jevons, *Theory of Political Economy*, chapter iv.; Clark, *The Distribution of Wealth*, see index.

of that portion of the product of others which he secures. For example, the farmer may reserve some of his wheat for his own consumption and with the balance obtain some of that which the weaver, the grocer, the carpenter and others have produced. Or if the nature of the commodity is such that it is adapted to final consumption only after it has passed through one or more processes carried on by others, he who produces it, will expect to sell all of it. Such is the case when the individual confines himself to raising cotton or other raw materials. Here the individual's share of product consists entirely of what he secures from others.

From the extensive application of division of function in modern society, it has resulted that a very considerable portion of the effort to satisfy wants is concerned with the operation of buying and selling. Considered as a phase of the economic process, this is called exchange, and is defined to consist of the transfer of ownership in wealth, or in the use of wealth. But though this is the immediate object of buying and selling, the real significance of exchange as a feature of economic activity arises from its relation to the distribution of product among members of society. Through the complicated and apparently confused mass of transactions concerned with buying and selling, with markets and with all that is related to the transfer of ownership, there is in process of determination the amount of total product

which each member of society receives. And from this it follows that upon the existence of the conditions necessary to exchange and upon the terms of the exchanges effected will depend the character of distribution and the efficiency of the economic process, to the extent that this is dependent upon distribution.

85. The conditions which must exist in order that exchange should take place are not difficult to ascertain. If an exchange of commodities is possible, it will occur when each of two parties desires a commodity possessed by the other more than that possessed by himself. Thus, if one man, who owns a horse, prefers a certain piece of land to the horse, and the owner of that piece of land prefers the horse to the land, they will exchange. Such a condition as this has been called a double coincidence of desires, and when this exists an exchange follows, provided the nature of the commodities and the other circumstances involved permit of an exchange.

Carrying the analysis one step further, it appears that two conditions are essential to the existence of a double coincidence of desires. In the first place, it is necessary that the character of the commodity possessed by each, as regards its general nature, its quality and its available quantity, should be such as to meet the desires of the other party; in the second place, it is necessary that the two parties should agree as to the rate of exchange, *i. e.*, as to the relative amounts of want-

attracting power possessed by each commodity,—in short, they must agree as to the price. Thus, in the illustration given, an exchange between the owner of the horse and the owner of the land would not take place if the character of the horse or of the land did not suit the would-be purchaser; nor would there be an exchange if the owners did not agree as to the relative values of the horse and of the land, even though the one desired *a* piece of land more than his horse and the other preferred *a* horse to his piece of land.

86. The fulfillment of the first of these conditions depends primarily upon the accuracy with which individuals in producing with a view to meeting the wants of others, forecast those wants and adjust their production thereto. But it may happen that, even when the commodities produced are desired, an exchange will be prevented through an absence of the necessary *coincidence* of desires. To illustrate, one person, A, with meat to sell, may desire clothing; another, B, with clothing to sell, may desire fuel; a third, C, with fuel to sell, may desire meat. As the case stands, there does not exist the double coincidence of desires necessary to effect an exchange. But if the owner of meat, A, knows that C, who has fuel to sell, wants meat, while B, who has clothing to sell, wants fuel, A may exchange his meat with C for fuel, and then exchange this with B for clothing. Fuel becomes to A the medium through which a double coincidence of desires is established, first between him-

self and C, and then between himself and B. This is typical of a condition that often arises in modern industrial society, where it is seldom that both of the parties to an exchange have final desires for the commodity possessed by the other. As in the illustration, the obstacle to an exchange that would otherwise exist, is commonly removed by the use of a medium of exchange.

The essential function of a medium of exchange is to supply a double coincidence of desires. In order that a thing should perform this function it must possess such characteristics as will enable the person receiving it to secure that which he desires through its use. Or, to state this as a general principle, to serve as a medium of exchange, a thing must possess the power to command property in commodities. The reason is obvious. An individual is willing to exchange his commodity for something which he does not desire for itself, provided it will enable him to secure that which he does so desire. Out of the use of a medium of exchange arise numerous questions as to the best way to supply it. From various causes, it may vary in its power to command property in commodities, *i. e.*, in its purchasing power, and such variations affect vitally the shares received by members of society. For the present discussion, however, it suffices (1) to describe the function of a medium of exchange in the general economic process, which consists in facilitating the operation of buying and selling by

assisting to secure a double coincidence of desires and (2) to state the requisite for performing that function, which is the possession of power to command property in commodities.

Another method of obviating the difficulties involved in securing a double coincidence of desires, is by the use of credit, though an exchange on the basis of credit is, in reality, an incomplete exchange. In modern business, as has already been pointed out, credit has become an important factor in the process of transferring ownership in commodities; according to conservative estimates, from 80 to 90 per cent. of the entire volume of trade is carried on by its use. Under such circumstances the conditions essential to the maintenance of credit become of the highest importance.

In a well ordered society, whose legal machinery provides adequate facilities for the enforcement of contracts, the most important requisite for efficient credit is stability in the value of that which society establishes as a legal tender, *i. e.*, that whose payment society recognizes as a fulfillment of the obligation involved in a contract. For instability in the value of the legal tender introduces uncertainty as to the ultimate result of credit transactions and invariably leads to a contraction of the use of credit. If the value of the legal tender increases, debtors are obliged to give in payment of obligations a greater amount than was contemplated when the contracts were made; and if the value of the legal tender decreases, there is an opposite result, the

debtor becomes able to meet his obligations with less value than was contemplated. In the former case the creditor gains at the expense of the debtor; and in the latter case, the debtor gains at the expense of the creditor, both of which results seriously impair the efficiency of the economic process.

87. But even though the commodity possessed by each of two parties suits the other so far as its character is concerned, an exchange will not take place unless an agreement is reached as to the relative values of the two commodities, *i. e.*, as to the price of each. An agreement by two parties as to the price in a proposed exchange of commodities depends upon the status of the alternatives that are available to each; for, in deciding upon the question of price, preliminary to an exchange, the matter presents itself to each of the parties as a choice between alternatives. Each may either (1) accept the estimate of the relative values of the commodities made by the other, or (2) seek an exchange with someone else offering more favorable terms, or (3) retain his commodity for his own use.

The availability and desirability of these alternatives depend upon a variety of conditions. As division of function increases, thereby limiting the range of each one's operations within narrower bounds, the availability of the third alternative, *i. e.*, the use of one's commodity by himself, diminishes, for the supply of that which each produces tends to exceed what he requires for his own use. If the character of the commodity is such as

to necessitate further manufacture to fit it for final consumption, or if its durability is so limited as to require its immediate use, the disposition to accept almost any terms rather than not exchange will be very great. Indeed, if the commodity is not one that ministers to life, and its exchange is the only way by which its owner can obtain the necessities of life, the pressure to exchange becomes practically compulsion, and the proposed terms must be accepted or others found that are better. The availability of the second alternative depends upon whether another party can be found who places a relatively lower estimate upon the value of his commodity. This is but to say, in substance, that the availability of the second alternative depends upon the supply of and the demand for the commodities concerned. Indeed, the entire problem of the availability and desirability of alternatives in exchange rests upon the supply of and the demand for commodities. The question is primarily one of value.

88. The status of alternatives in exchange is of the highest importance in distribution. As has been said, they determine in part whether in any given case a prospective exchange of commodities will actually take place. But more than this, they determine largely the effect of exchange upon the distribution of wealth; for upon the alternatives available depends the price at which commodities exchange and upon the price received depends the effect of an exchange upon the shares of the par-

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ties thereto. An exchange at a relatively high price means to the seller a large share and to the purchaser a correspondingly small share of the commodities exchanged; while an exchange at a relatively low price means exactly the opposite, to the seller a small share and to the purchaser a correspondingly large share of the commodities exchanged. One's share of product, then, in so far as it is received through exchange, depends upon his ability to control the alternatives in connection with exchange.

To the extent that one receives a part or all of his share through an exchange of commodities, the size of his share is determined by (1) the amount of commodities sold, and (2) the price obtained; for, other things being equal, the larger the amount of one's sales and the higher the price, the larger is the share received in the distribution of wealth. It follows, then, that the problem presented to every man in offering his commodities for sale, is how to sell as much as possible at the highest price possible. But the amount of sales and the price obtained sustain a vital relation to each other. The lower the price of the commodity, *i. e.*, the smaller the amount of other commodities demanded in return for it, the larger will be the number of those willing to exchange. This is the meaning of the common statement, "the lower the price, the greater the demand," *i. e.*, the lower the price, the larger is the number of those whose want is sufficiently intense to induce them to give the amount

of their own commodity necessary to effect an exchange. On the other hand, the lower the price, the smaller is the amount of product received as the result of a given exchange. The efforts of individuals in exchanging commodities are, therefore, directed towards securing the largest extent of sales and the highest price which together will give the largest net returns.

89. If one would extend his sales, he must offer better alternatives than are available elsewhere. To do this, he must lower the price of his commodity, or, what amounts to the same thing, give a better article for the same price. For, so far as the purchaser is concerned, the lower the price, the more advantageous is the exchange, and in seeking to expend his energy for the satisfaction of his wants in the direction of least resistance, he seeks to purchase at the lowest price. To the purchaser, as has been seen, the question is one of alternatives; and the more advantageous the alternative offered by any one, the larger will be the number of purchasers.

To the extent that alternatives are available at any time, there exists rivalry of interests among those offering them. To the seller, the existence or rival alternatives presents an obstacle to the satisfaction of his wants, and his effort to overcome that obstacle, which leads to a lowering of the price, is competition.[1]

[1] Cf. § 32.

The degree of rivalry existing and the intensity of the competition vary, because the availability of the alternatives varies. The more nearly commodities resemble each other and appeal to the same want, the more intense will be the competition. Thus competition between sellers of wheat will be more intense than between sellers of wheat and sellers of meat, but since a purchase of either one of these two commodities may prevent a purchase of the other, there is some competition between those offering them for sale. In like manner, though in different degrees, there is competition between both the sellers of wheat and of meat, on the one hand, and the sellers of books, on the other. Wheat and meat being food products, the competition between different sellers of wheat or of meat, or between the sellers of wheat and of meat, will be more intense than the competition between the sellers of those commodities and the sellers of books. But since a purchase of wheat or of meat may prevent a purchase of books, and, *vice versa*, a purchase of books may prevent a purchase of wheat or of meat, there is some competition, not only between farmers, and between farmers and butchers, but also between farmers and butchers, on the one hand, and book-sellers, on the other. The extent of competition depends upon the amount and character of the existing alternatives. *Some competition, however, is present and effective to the extent that any alternative is available.*

The effect of competition between sellers is to lower prices. The extent to which competition will be carried and prices lowered, depends upon the nature of the interests involved. It will cease normally when price reaches the lowest point that will suffice to induce the production of the commodity, for at that point alternatives tend to be withdrawn. If a fair return above the expense of production be included in cost of production, cost of production may be said to determine the normal limit to downward movements in price. To carry price lower than this would result in a loss, and rather than submit to that an individual will transfer his attention to the production of some other commodity which seems to offer better prospects of reward. Here, then, is the relation sustained by cost of production to value. It is not the basis of value, but through price, which is value expressed in terms of a measure, cost of production sets a limit below which value will not normally fall.

But competition may force price below the normal limit. In the case of the so-called permanent investments, as of fixed capital in a railroad and other similar enterprises, the transfer of which to other industries is difficult or impossible, competition may force price down to a point where the returns but little more than suffice to pay the current expenses of operating the business. For conditions may arise in which the choice lies between such small returns and nothing at all. Indeed,

hoping for better conditions in the future, price may fall temporarily even lower than this. But competition that drives price lower than cost of production cannot be permanent. For, as has been said, investments will cease to be made in an industry where such conditions arise; when, therefore, existing facilities for production along such lines are exhausted, the former supply of alternatives will no longer be provided and competition will decrease. Still, the character of the industry may be such that much time must elapse before present facilities are exhausted, hence the competition that carries price below the limit of profitable industry may be long continued and work great injury to economic interests in general.

90. The extent of the individual's sales, then, depends upon his ability to offer through lower prices, more advantageous terms than can be secured elsewhere, and so long as other alternatives are available, competition forces prices down. But one's share in product may sometimes be increased in another way, *i. e.*, through raising the price of the commodity offered for sale. Moreover, the same impulse that leads one in general to seek the maximum of want-satisfaction, will lead the seller of a commodity to increase the price thereof, provided, by so doing, he can increase his share of wealth.

The availability of this method of increasing one's share depends upon the ability to control the supply of the means for want-satisfaction, for in so

far as one controls the supply of that which is required to satisfy wants, he lessens the purchaser's ability to avail himself of another alternative and is thereby enabled to fix the terms of exchange. Such power of control on the part of the seller in his contest with the purchaser over the terms of exchange, is monopolization.[1]

As with competition, monopolization varies in effectiveness with the nature of the commodity concerned. The more nearly commodities minister to the same want, the greater is the necessity of controlling the supply of all of them, if prices are to be raised. Thus gas, electric light, oil and candles, all minister to the desire for light. Of these, gas and electric light probably minister more nearly to the same want than does any other combination of them; while gas, electric light and oil are much preferred to candles for general lighting purposes. The control of the supply of gas, electric light and oil would give their possessor more power to increase his share by increasing price than would control over gas, electric light and candles, or over any other combination of these commodities. The degree of monopolization depends upon the amount of control over the possible alternatives. *Some monopolization, however, is present and effective to the extent that any such control exists.*

The effect of monopolization on exchange is to raise prices. It is sometimes said that monopoli-

[1] Cf. § 32.

zation lowers prices, and instances are cited where the growth of large industries has resulted in reduction in price. But to the extent that individuals seek the maximum satisfaction of their wants, every instance of a fall in price will be found due to the existence of competition, arising from the fact that alternatives are available which might be preferred but for the lowering of price. The view that monopolization lowers price rests upon a mistaken idea of what monopolization really is. Monopolization is not mere power of control over commodities; it is power of control in its relation to rivals. The degree of monopolization is influenced but not determined by the absolute amount of commodities controlled. If six persons were on an island without the means of communication with other places, and with only one box of biscuits for food, the possession of that supply of biscuits would give its owner an immense power of control over the conditions of their sale. But ownership of the same amount of biscuits in a country where others were available and where supplies of other kinds of food were abundant, would give their possessor but a slight control over the conditions of their sale. The degrees of monopolization given by ownership of the same amounts of supply are vastly different in the two cases. In the former case, monopolization approaches as near the absolute as can be conceived; in the latter, it is too small to be recognized except for scientific purposes. On the other hand, control over a large amount of

commodities does not necessarily result in a high degree of monopolization, for monopolization is a matter of ability to control the conditions of want-satisfaction in the presence of rival interests, and the absolute amount of commodities controlled affects it only as it affects that power of control.

Monopolization as well as competition has a normal limit beyond which, even if there exists power to raise prices, it will not be exercised. This normal limit is the point beyond which the inducement of purchasers to produce their commodities, is destroyed. That point is the cost of producing those commodities. Hence the normal limit to upward movements in the price of any commodity is the cost of producing other commodities which are to be given in exchange. For to carry price beyond this point involves an impairment of productive efficiency and, therefore, ultimately, the defeat of the end for which prices are raised, *i. e.*, want-satisfaction.

But though a normal limit is thus set to upward movements in price, it is by no means certain that, in any given case, the increase will cease when price reaches that point. Conditions may be such that those possessing the power of control will not be directly and immediately affected by the evils of excessive prices. Under such circumstances, ignorance of the ultimate effects of their actions or an absence of concern for the social welfare in general, may delay the working of the remedy for excessive prices which inheres in their effect upon production, and result in much damage.

91. From the foregoing analysis of the conditions determining the increase and decrease of prices, there follows the law of price: *the price of a commodity in exchange is the resultant of the influence of competition and monopolization, falling as competition prevails and rising as monopolization prevails.*

The normal limit to the downward movement in the price of any commodity is its cost of production, because the disposition of producers to cease providing a supply of commodities when price reaches that point, by lessening the availability of alternatives, gives to those still offering the commodity for sale an increased power to control price. In other words, in the contest between competitive and monopolistic influences, the latter tends to prevail and to prevent further reduction in price when price falls to cost of production.

The normal limit to upward movements in price is the cost of producing other commodities which are to be given in exchange, because above that point the alternative of ceasing to produce those other commodities for exchange becomes preferable to the terms of exchange offered. In other words, in the contest between the competitive and monopolistic influences, the former tend to prevail over the latter and to prevent further increase in price, when price reaches a point where more is required of the purchaser than the cost of producing the commodities he can offer in exchange.

92. Thus far the analysis of exchange has viewed the operation from the standpoint of a

seller and his relation to a purchaser. There are, however, two parties to every exchange, and the conditions attending the action of one have an inevitable effect upon the other. Hence, so long as but one of the parties to an exchange and his commodity are considered, the analysis is incomplete. It should be observed, however, that the inadequacy of such an analysis does not arise from the fact that it views an exchange from the standpoint of the seller rather than from that of the purchaser, but from the fact that it considers the matter from the standpoint of but one of the sellers. So far as an individual's attitude of mind is concerned, buying and selling may differ, but as economic phenomena they are opposite ways of looking at the same act. He who is seeking to buy to the best advantage is seeking also to sell to the best advantage that which he offers in exchange. To complete the analysis, then, it is necessary to consider the effects of an exchange in relation to both of the parties thereto.

When the price of a commodity falls, the price of the commodity offered in exchange by the purchaser of the first commodity rises, and *vice versa*. Thus if one bushel of wheat is exchanged for five pounds of meat, the price of one bushel of wheat is five pounds of meat, and the price of one pound of meat is one-fifth of a bushel of wheat. If, now, because others offer more advantageous terms, it becomes necessary to give two bushels of wheat for five pounds of meat, the price of wheat

falls; the price of a bushel of wheat becomes two and one-half pounds of meat. But this involves a rise in the price of meat, the price of one pound of which becomes two-fifths of a bushel of wheat. In other words, the competition between the owner of wheat and his rivals has increased the control of the owner of meat over the price of his commodity. But this indicates a greater degree of monopolization on the part of the owner of meat, for the power of control which results from the weakness of others is as truly monopolization as the power of control that results from adding to one's own strength. Competition, then, between rivals in the selling of commodities is one of the methods by which the purchasers thereof increase their monopolization in the sale of the commodities which they offer in exchange.

On the other hand, if the owner of wheat can so far control the supply of wheat and its rival commodities that he can compel the owner of meat to give ten pounds of meat for one bushel of wheat, the price of one bushel of wheat becomes ten pounds of meat, and the price of one pound of meat becomes one-tenth of a bushel of wheat. This means that monopolization by the sellers of wheat and its rival commodities has increased the intensity of the rivalry against which the owner of meat is obliged to contend, that is to say, it has increased the competition he has to meet. Monopolization by the sellers of a commodity is, then, one of the methods by which the com-

petition to which purchasers are subject in the sale of their commodities, is increased. Competition and monopolization in their relation to the exchange of commodities are opposing and inseparable manifestations of economic activity.[1]

93. The fact that an increase in the price of one commodity in an exchange involves a decrease in the price of the other commodity, and *vice versa*, has an important bearing also upon the relation of the shares of the parties concerned to each other. The immediate effect of a movement in price is to increase the share of one and to decrease the share of another. Thus, if the price of one bushel of wheat is five pounds of meat, an exchange on that basis results in one man parting with one bushel of wheat and receiving five pounds of meat, while the other parts with five pounds of meat and receives one bushel of wheat. But if the price of one bushel of wheat increases to ten pounds of meat, an exchange gives to the man who parts with one bushel of wheat, ten pounds of meat, while he who parts with five pounds of meat receives but one-half a bushel of wheat.

The advantages or disadvantages resulting to one through a change in the prices of commodities may be offset in the end wholly or partly by the subsequent effect of that change upon the other party. Thus if an increase in the price of a commodity so far diminishes the

[1] Cf. § 33.

amount received by the purchaser thereof, as to decrease his productive efficiency, the first party to the exchange may suffer as a result of diminished production. On the other hand, the disadvantage resulting to one through a decrease in price may be offset by an increase in sales, or by the increased productivity of the other party to the exchange, who, now that he receives a larger return, may feel an increased inducement to act. But whether these changes in production affect him who gains or loses by a rise or fall in the price of his commodity, depends upon whether subsequent exchanges diminish or increase his share.

From the relation of the terms of exchange to the shares received by the parties thereto, it follows that, in any given case, exchange, or as it is often designated, trade, is not necessarily of equal advantage to both parties. Indeed, although under the circumstances existing at the time, each of the parties to an exchange must receive, or think that he will receive, some benefit, otherwise the exchange would not take place; still, if the exchange results in giving to either of the parties less than was expended by him in production, or less than he might have received had the division of function which gave rise to the exchange, not taken place, the ultimate result of the operation is to that party a loss.

The relative distribution of benefits in an exchange depends entirely upon the relative degrees to which competition and monopolization prevail in

connection with the respective parties. To the extent that one is subject to competition in determining the conditions of exchange, his share decreases, and the share of the other party increases, at least until competition shall have gone so far as to impair productive efficiency. On the other hand, to the extent that one can avail himself of monopolization, his share increases, while the share of the other party decreases, until excessive monopolization impairs production. *Healthy trade depends upon a proper balancing of the competitive and monopolistic influences.*

94. The analysis of the effect of price on the shares received by individuals has been illustrated by cases in which exchange is made without the use of a medium of exchange. The employment of a medium of exchange, however, though affecting materially the extent to which exchanges take place, in no way alters the fundamental principles involved. The advantage of analyzing exchange as it proceeds in the absence of a medium of exchange lies in the fact that certain concepts associated with a medium of exchange tend to obscure the essential character of the process. In the language of the market, selling is usually thought of as an exchange of some general commodity for a medium of exchange, or money as it is commonly called. Hence, in selling wheat, for example, it does not appear that one man sells wheat and buys a medium of exchange,—gold, silver, copper, paper or whatever serves that purpose,—while the

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other sells the medium of exchange and buys wheat. Yet such is the case, and failure to recognize the fact leads to erroneous ideas as to the function of a medium of exchange. There may be and usually is a difference between the want that gives value to wheat and the want that gives value to a medium of exchange. The former is wanted for personal consumption or for use in production, while the latter is wanted to secure something else that may be used for personal consumption or in production. But in an exchange of a commodity for a medium, both are bought and both are sold. The main difference between an exchange where a medium is employed and one where commodities are exchanged for each other directly, lies in the fact that in the former case two exchanges are necessary, where in the latter, one suffices.

The essential character of an exchange is still further concealed, when the same commodity serves to perform the functions both of a medium of exchange and of a standard measure of value, as is now the case with gold in the United States and silver in Mexico. Here, as elsewhere, price is determined by comparing the values of the two commodities exchanged, but only one is thought of as a commodity. Under these circumstances, to discover the real nature of an exchange, it becomes almost indispensable to revert to the simple case in which commodities are exchanged for each other directly and their prices are determined by a comparison of their values with each other.

The foregoing consideration of the process of exchange leads to the following conclusions :—

(1) Under division of function, as society is now organized, the share of each member of society is received wholly or in part through an exchange of commodities.

(2) In so far as the share of any one is secured through exchange, the size of the share depends upon the amount sold and the price obtained.

(3) Price, which is value expressed in terms of a measure, falls when competition prevails, and rises when monopolization prevails, being, in any given case, the resultant of these opposing manifestations of activity.

(4) Healthy trade and, therefore, efficient distribution, require that competition and monopolization should be properly balanced.

4

THE SHARES IN DISTRIBUTION

95. As has been seen, in society under its present organization, product is distributed mainly on the basis of value of services. In so far as differentiation in the ownership of the factors of production,—situation, capital, enterprise and labor,—exists, there result distinct shares corresponding to each, so that were ownership in these factors wholly differentiated, there would be four distinct shares. These are designated respectively rent, interest, profits and wages. These terms serve to distinguish the several shares from each other and also to distinguish the amount that is given in exchange for the use of the factors from that given in exchange for the factors themselves, in case of a transfer of ownership, as where situation and capital are bought and sold. In this connection it is necessary to guard against the tendency to consider rent, interest, profits and wages, not only as distinct funds, but also as dis-

Walker, *Political Economy*, Pt. IV., chapters i., vii.; Ely, *Outlines of Economics*, Bk. II., Pt. III.; Gide, *Political Economy*, trans., Bk. IV., Pt. II.; Mill, *Principles of Political Economy*, Bk. II., chapter iii.

tinct kinds of funds. They are but special terms to designate the portions of product that go to the owners of the several factors of production, and a full appreciation of this fact will assist in understanding both the relation of the shares to each other and the principles determining them.

In actual business, these shares, considered purely as returns for the respective factors, seldom or never appear entirely separate from each other, because absolute differentiation in the ownership of the factors seldom or never appears. Still it is important to consider each of these shares by itself in order to ascertain what it would be, if it were wholly distinct from the others. This will throw light upon the principles determining the shares actually received by the social classes, which represent more or less completely differentiated ownership in the factors.

96. The first requisite for ascertaining the laws which regulate the amount of the several shares, is to arrive at a clear understanding of what it is that is to be distributed. To this end, it may be well to recall that distribution is part of the general economic process, and that the necessity for distribution arises from the fact that men coöperate to produce the means to satisfy wants. The natural and correct inference from this is that the fund to be distributed consists of the output of production. The question here raised is, what are the relative amounts of this output that go to the owners of the several factors.

But in the process of production, economic energy is expended and if the efficiency of production is to be maintained, the energy expended must be renewed. The further queston arises, then, as to whether the inquiry concerns the distribution of total product or only of a net product which remains after deducting that which is necessary to restore the efficiency of the factors.

Whether or not it is held to be a matter of indifference to take, as the fund whose distribution is to be analyzed, total product or net product, it is clear that one or the other should be selected. Scientifically, it is not permissible to include in some of the shares only the net returns above the expense of renewing the corresponding factors, and then to compare such shares with others from which no such deduction has been made. For example, interest is commonly considered to include only the amount that goes for the services of capital over and above what is used to maintain the capital fund unimpaired, while wages are considered to include the entire return to the owner of labor, no deduction being made for the amount required to restore the strength and efficiency of the laborer. To place the law governing the net return to the owner of capital in the same class with the law governing the gross return to labor is illogical. The matter will be much simplified if the attention is directed at once to total product, so that the question becomes one of ascertaining the laws that govern the distribution of total product among the

owners of the four factors, situation, capital, enterprise and labor. Total product will then equal the sum of rent, interest, profits and wages.[1]

Furthermore, in seeking the principles of distribution, the several shares should be viewed purely as returns for the services of the corresponding factors of production. The results so obtained may afterwards be compared with the funds to which the terms rent, interest, profits and wages are applied in general business intercourse. To avoid confusion, the terms rent, interest, profits and wages, qualified where it may seem necessary by "economic," as "economic rent," "economic interest," etc., will be employed in referring to the shares viewed from the standpoint of economic theory, while the terms "commercial rent," "commercial interest," etc., will be employed in referring to these shares as they appear in actual business.

97. The amount of each share under the prevailing system of distribution, depends primarily upon the value of the services of the factors, which, in turn, depends upon the relation of the

[1] Taxes, which are sometimes added as a fifth share, are in fact paid out of what has been received as rent, interest, profits or wages. Where the state reserves a portion of the product before the individual members of society receive their shares, either it does so as the owner of one or more of the factors of production or it adopts this method of collecting revenue from its citizens by levying upon income at its source. Cf. Walker, *Political Economy*, p. 272.

supply of the services of the several factors to the demand therefor. Thus, rent depends upon the relation of the supply of the services of situation to the demand therefor; interest, upon the relation of the supply of the services of capital to the demand therefor; profits, upon the relation of the supply of the services of enterprise to the demand therefor; and wages, upon the relation of the supply of the services of labor to the demand therefor. For the principle that applies to the value of the services of the factors of production, differs in no respect from the principle according to which value in general is determined. Furthermore, if the supply of the services of any factor increases relative to the demand therefor, the value of those services will decrease, and if the supply decreases relative to the demand therefor, the value will increase. As with commodities in general, the supply at any time is not the amount in existence; it is the amount actually available under given conditions. On the other hand, the demand is not the indefinite want for services in general, but the specific want for the services of the factors actually existing under the prevailing conditions.

The value of the services of the factors being determined by the relation of the supply of each to the demand therefor, the return to the owner of any factor, in so far as its services are sold, depends upon the conditions determining the rate of sale, *i. e.*, the price. Price is the resultant of the workings of competition and monopolization.[1] The

[1] See § 91.

amount, then, of product that will go to the owners of the several factors through exchange, depends upon the relative extent to which they are subject to the influences of competition and monopolization. In so far as competition prevails in connection with the sale of the services of any factor, *i. e.*, in so far as alternatives exist that may be preferred to it, the share accruing to its owner will decrease ; in so far as monopolization prevails, *i. e.*, in so far as the owner of any factor controls the alternatives that might be preferred, the share accruing to him will increase.

These, then, are the principles which determine the amount of rent, interest, profits and wages. There exists a certain amount to be divided, *i. e.*, total product. This is determined by the efficiency of production. The relative amounts which the owners of situation, capital, enterprise and labor receive for the services of their factors, depend upon the status of competition and monopolization. If the amount produced by a given quantity of the factors of production is ten bushels of wheat, the proportion of the wheat which will become rent, interest, profits and wages, depends upon the extent to which competition and monopolization prevail in connection with the sale of the services of the factors. Thus if, in a given case, the laborers possess a large control over the sale of their services, either because the supply of labor is small or because the owners thereof act together in its sale, while, on the other hand, rivalry exists between

the owners of situation because its supply is large, it being in the main a matter of indifference to the producer whether this or that situation is secured, the influence of monopolization will tend to prevail in determining the share of labor, while the influence of competition will tend to prevail in determining the share that goes for the use of situation, *i. e.*, the owner of labor will secure a relatively large share of the total product and the owner of situation a relatively small share. Under opposite conditions as to the availability of labor and situation, the share of labor will be relatively small and that of situation relatively large. The same is true of the relation of each of the shares to the others.

Furthermore, the same principle applies in determining the distribution of any increase in product. If by the application of increased amounts of one or more of the factors or by better organization of industry, the amount of wheat produced is increased to twelve bushels, the extent to which the shares will be affected, is determined by the extent to which the owners of the several factors are subjected to competition and monopolization; the advantage flowing towards monopolization and away from competition. And the same is true of the distribution of an increase in the value of the output that results from an increased demand for the commodity. If the value of an output of ten bushels of wheat becomes $12.00 instead of $10.00, as a result of an increased demand for wheat, the

distribution of this extra value is determined by the same principles that operate in determining the distribution of an increase in the amount of wheat.

98. As is the case with exchange in general, so with the shares which are the returns for the services of the factors, there are normal minimum and maximum limits beyond which these shares ordinarily will not go. The principles which apply here are essentially the same as those which apply in the case of general prices. The problem is this :— Given a product that is to be divided among the owners of situation, capital, enterprise and labor, through the sale of the services of these factors, what are the minimum and maximum amounts that, under normal conditions, can be secured by each?

The minimum limit to each share is the smallest amount that will suffice to induce the owner thereof to allow the use of his factor. To the extent that the employment of any factor in production involves an impairment of its efficiency, the owner thereof will not, under ordinary circumstances, allow its use for less than will suffice to renew its efficiency. Indeed, this minimum limit is set by the necessities of production, which require the restoration of the energy expended as a condition of continued efficiency. Continued use of a factor without renewal of its productive capacity would in the end destroy the factor and defeat the end of the economic process by destroying power to produce.

The maximum limit of the share which the owner

of any factor can secure under normal conditions is the difference between the total product and the sum of the minimum limits of the other shares. Given the minimum limits of the shares, the maximum limit of any share is determined by a simple mathematical computation. The most that is available for distribution under any circumstances is total product, and to the extent that any share has its minimum limit, the maximum that can normally go to any other share is limited thereby.

To the extent that competition exists among the owners of any factor, their share will tend towards its minimum limit; while to the extent that they can avail themselves of monopolization, their share will tend towards its maximum. As the prices of general commodities may sometimes be forced below cost of production, so, in the case of distribution, excessive competition or monopolization may at times drive some share below what would suffice to renew the efficiency of the factor involved. Such an excess of competition or monopolization, however, tends to provide its own remedy through its effect in impairing production. But the mere possibility that a share can fall below the normal minimum, even temporarily, is a matter of serious concern to society, for its consequences may not be temporary.

99. From the nature of the conditions determining the shares in distribution, it follows that the immediate effect of an increase in the share accruing to the owner of any factor is a decrease in

some one or more of the other shares, and that a decrease in any share has for its immediate effect the increase in one or more of the other shares. But the amount that is received by the owner of any factor is an important element in determining the efficiency of production. Hence, if the result of an increase in any share is such an increase in productive efficiency as to lead to a corresponding increase in output, provided such increase in output accrues to the owners of the other shares, the ultimate result will be an increase in one share without detriment to the others. Indeed, since conditions may exist in which the increased incentive resulting from an increase in a share, will enlarge the fund for subsequent distribution beyond the amount of such increase in the share, it is possible that all the participants in distribution may ultimately profit by adding to one of the shares. In a similar manner, the decrease in any share may be more than offset ultimately by an increase in production. A decrease in any share will result in at least a temporary increase in one or more of the other shares, but the increased incentive of those profiting thereby may, under some circumstances, lead to an increase in the total output. The mere fact, however, that an increase in production follows an increase in a share, does not signify that an increase in one share has taken place without loss to any other share. *Such a result follows only when in subsequent distribution, the increased output accrues to the advantage of him whose share was previously decreased.*

To this extent, and to this extent only, are the interests of the owners of the different factors of production identical rather than antagonistic. In so far as there is a possibility that each may profit thereby, it is to the interest of all that as large a fund as possible should be produced. Beyond this, in the process of distribution, there is rivalry, and the distribution of product among the owners of the factors depends upon their relative powers of control, subject only to the limitation that excessive use of the power of control by impairing the process of production, may defeat its own end.

100. Competition among the owners of any of the factors, increases the power of control, *i. e.*, the monopolization of one or more of the other groups of owners; and monopolization by the owners of any of the factors, increases the competition among one or more of the other groups of owners. Thus competition among laborers for employment, increases the power of employers to control the terms of exchange, and such power of control is as truly monopolistic as any other. The difference between the power of control by employers which results from a formal agreement between them and that which results from the competition of laborers, does not lie in the fact that the former is monopolistic and the latter not, unless the same economic phenomenon is called by different names under different conditions. The difference in such a case is purely one of method of obtaining power of control, and power of control which affects rival interests is

monopolistic however it may arise. On the other hand, combinations among laborers which give to them increased power of control over the sale of their services, is monopolization, and increases the competition among employers.

In like manner, competition among employers increases the laborers' power of control, *i. e.*, their monopolization of their services, while combination among employers or any other method by which their power of control is increased, increases the competition among laborers. The same is true of competition among the owners of any of the factors and of monopolization by any of them, in relation to the owners of the other factors.

101. The introduction of a medium of exchange or of a standard unit or measure of value in no way alters the fundamental principles according to which the shares are determined. When a medium of exchange is employed, the amount of product finally accruing to the owners of the factors of production depends upon the amount of the medium received and its power to purchase commodities. Here, two exchanges are necessary where otherwise one would suffice, and each of these exchanges is subject to the principles that govern in buying and selling. It is often desirable to distinguish between that which the owner of a factor receives in a medium of exchange and that which ultimately comes to him, so the shares are sometimes called "nominal" when reference is made to the amount received in the medium of exchange, and "real" when the

amount of the medium received and its purchasing power are meant. The use of a standard measure of value in connection with the sale of the services of the factors, as in the case of exchange in general, involves the determination of price by comparing the value of the services and of that which is received in payment therefor, with the value of a third commodity, instead of with each other directly, as would be done in the absence of a standard measure.

While, however, the employment of these aids to exchange does not alter the fundamental principles involved, they are not without special influence upon distribution. The purchasing power of the medium of exchange and the value of the standard measure are subject to variations. A fall in the power of the medium of exchange to purchase general commodities will decrease the shares unless there is a corresponding rise in the price of the services of the factors, and the opposite effect will follow a rise in the general purchasing power of the medium of exchange, when unaccompanied by a fall in the price of the services of the factors. A similar effect follows from changes in the value of the standard measure. If, when a change occurs in the value of the standard measure, the prices of the services of the factors vary exactly as do the prices of general commodities, such change in the value of the standard measure, though affecting the nominal shares, will not alter the real shares. But the prices of the services of the factors do not nec-

essarily nor presumably change coincident and coextensive with changes in the prices of commodities. It is doubtless true that when changes occur in the prices of general commodities, there tends to follow a readjustment of the prices of the services of the factors, but such readjustment is accomplished, if at all, through the working of competition and monopolization, as in the ordinary determination of prices. Hence the introduction of a medium of exchange and of a standard measure of value, subject as they are to fluctuations, intensifies the advantages or disadvantages inherent in the several factors in their relation to monopolization and competition. And while, even under these conditions, there can be no doubt that the advantages to society from the use of a medium of exchange and of a standard of value, vastly exceed any incidental disadvantages, still the possible effect of fluctuations in the value of these upon the shares, emphasizes the desirability of securing as stable standards and media of exchange as possible.

The analysis of the division of product into rent, interest, profits and wages, gives the following principles of distribution :—

(1) The shares are the returns for the services of the several factors of production and are subject to the general law of value.

(2) The value of the services of any factor depends upon the relation of the supply thereof to the demand therefor, varying as demand and inversely as supply varies.

(3) The amount of any share at any time is the resultant of the influence of competition and monopolization upon the sale of the services of the corresponding factor.

(4) The normal minimum limit to each share is the amount necessary to bring the corresponding factor into activity; the normal maximum limit is the total product less the sum of the minimum shares of the other factors.

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5

RENT

102. Rent is the return to the owner of situation for the services thereof. The principles of distribution as applied to rent may be thus stated:—Rent depends primarily upon the value of the services of situation; the value of the services of situation depends upon the relation of the supply thereof to the demand therefor. The amount of rent received by the owner of situation from the sale of the services thereof is determined by the competitive and monopolistic conditions prevailing. The normal downward limit to rent is the smallest amount that will suffice

Ricardo, *Principles of Political Economy and Taxation*, edited by E. C. K. Gonner, chapter ii.; Walker, *Political Economy*, Pt. IV., chapter ii.; Laughlin, *Elements of Political Economy*, chapter xxii.; Gide, *Political Economy*, trans., Bk. IV., Pt. I., chapter iii., (vi.); Pt. II., chapter iv., (ii., iii.); Ely, *Outlines of Economics*, Bk. II., Pt. III., chapters i., ii.; Clark, *The Distribution of Wealth*, (see index); Jevons, *Theory of Political Economy*, chapter vi.; Mill, *Principles of Political Economy*, Bk. II., chapter xvi.; Marshall, *Principles of Economics*, Bk. VI., chapters ix., x.; Sidgwick, *Principles of Political Economy*, Bk. II., chapter vii.; Pantaleoni, *Pure Economics*, trans., Pt. III., chapter iv.; Von Wieser, *Natural Value*, trans., Bk. III., Pt. II.; Roscher, *Political Economy*, trans., Bk. III., chapter ii.

to induce the owner of situation to permit its use. For, if through the influence of competition among the owners of situation, rent falls below this point, situation becomes idle, and the decrease in the available supply of situation tends to check the fall in rent. The normal upward limit to rent is the difference between the total product and the minimum shares of interest, profits and wages. For, if through monopolization by the owners of situation, rent increases so as to encroach upon the minimum limits of some of the other shares, there will follow a decrease in the available supply of the corresponding factors. This will lead either to an increase in the shares that have fallen below the minimum or to an impairment of the efficiency of production, a condition that in itself will tend to diminish rent by decreasing the amount of wealth available for distribution.

103. Situation as a factor of production, usually exists in conjunction with capital in some form, generally soil. Hence rent is commonly considered by economists, to be a return for the services of land, though this concept is often qualified by adding to land other natural agents, and limiting all to their unimproved state. But so far as the nature of the services rendered to production is concerned, there is no difference between the functions performed by unimproved and those performed by improved land. Indeed, in so far as the function of material may be said to consist in embodying want-attracting power, there is no essential differ-

ence between the function performed by soil and that performed by other material commonly recognized as capital. The return, then, for the use of soil should not be considered as constituting a different share from the return for the use of such commodities as cattle, iron, lumber and cotton.

Nor can the definition of rent as return for the use of unimproved land and other natural agents be justified on the ground that this corresponds with the popular use of the term. For in popular usage, so far as the nature of rent is concerned, no distinction is made between improved and unimproved land; nor, indeed, is rent in business intercourse limited to the return for the use of land. In common phrase, the term rent is employed with varying consistency in transactions which involve the *loan* of any commodity as distinguished from the *sale* thereof. Thus in popular language, one pays rent for a factory, a farm, a machine, or anything else, when he obtains the right to use it without acquiring the legal title to the ownership of it. In case of such a loan, it is expected that the commodity itself will be returned to the owner. Commercial rent is thus to be distinguished from economic rent, whether the latter is considered as a return for the use of unimproved land and other natural agents, as in many economic treatises, or as a return for the use of situation only, the view here accepted.

Moreover, since situation usually appears in conjunction with some other factor of production,

economic rent, considered as a return for situation only, rarely, if ever, appears in actual experience as an entirely distinct share. A share in distribution would be pure economic rent only when the services of the other factor or factors associated with the situation, had no value. Thus when a share is received in return for the services of situation and capital, as in the case of a payment for the use of a farm, it is a combination of economic rent and economic interest, unless the services of the capital involved are without value.

The essential difference between rent and the other shares is sometimes held to arise from the peculiar nature of the law governing rent. According to this view, the distinguishing characteristic of rent is the fact that it is due to and determined by the difference in productive efficiency of different portions of the factor for whose services it is a remuneration. This leads to the inference that such differences in the case of the other factors do not affect the return for their services. But differences in productive efficiency in capital, enterprise and labor, cause very marked differences in the returns for the use of different portions of each of these; nor can any valid reason be given why such differences should be considered as of prime importance in connection with rent and of incidental or no importance in connection with the other shares.

The failure to recognize the fact that differences in productive efficiency affect the returns in the case

of each of the factors is largely due to the method of estimating those returns. Rent is computed on the basis of a unit of area; interest, on the basis of a unit of the value of capital; profits, usually, on the basis of a unit of the value of product, though sometimes on the basis of a unit of the value of that which is invested in an undertaking; and wages, on the basis of a per capita unit. These methods of computing the several shares suffice in making comparison between returns for different portions of the same factor, but a comparison of the principle determining a per acre return for situation (or land) with that determining a per cent. of value of capital return for capital, and a per cent. of value of product return for enterprise, and a per capita return for labor, involves a disregard of logical consistency. The effect of this in obscuring the influence of differences in the productive efficiency of different portions of the factors appears with special clearness in the case of interest. Differences of quality in capital manifest themselves in differences in the value of capital. Where, then, the owners of capital receive the same rate per cent. of value, it is inferred that differences in quality are without influence upon the returns. But it is evident that if each of two persons loans a machine of the same character except that one of them is antiquated, while the other possesses the latest and most efficient improvements, differences of quality will have as great an influence on the returns as in the case of situation (or land.)

104. Such differences as exist between the conditions determining rent and those determining the other shares,—and the extent of such differences has been greatly overestimated,—arise from differences in the potency of competition and monopolization in their relation to the several factors of production. Situation is immovable, hence its relation to production can vary only with movements in population or changes in transportation facilities. This fact tends to give very definite limits to the operation of competition and monopolization in the sale of the services of situation. Since the supply of situation available for any given demand is fixed by nature, the number of available alternatives in any given case is definitely limited; and since no portion of supply can, physically speaking, be substituted for another, the ownership of any specific portion of supply is in a high degree monopolistic. Accordingly, as population increases and with it demand for situation, the price of the services of situation will tend to increase.

Owing to the limits placed by nature upon the supply of situation, it follows that whatever differences there may be in the productive efficiency of two areas in use for the same market, will tend to redound to the advantage of the owner of situation. Thus the owner of a lot in the center of New York City can secure from the sale of its services nearly (or quite) all the advantage that it has over a lot in the suburbs, for since the supply of area in

that particular place is absolutely limited, a very slight advantage allowed to the would-be purchaser of the services of situation will lead him to prefer that which is more favorably located. Nor is the principle here involved peculiar to situation and rent. It is equally true of every factor, that differences in productive efficiency redound to the advantage of the owner thereof, provided the difference is sufficiently great to affect the demand for the services of the factor. For where demand suffices to bring into activity different grades of any factor, he who owns the better grades, possesses a power of control over the terms of exchange which enables him to secure most or all of the advantage arising from the superior efficiency of his factor. To that extent at least monopolization prevails over competition in determining the price of the services of his factor.

Though monopolization enables the owner of any situation to profit by its superior location for production, it is not to be inferred that competition is without influence in determining rent. Other situations appear in competition and tend to prevent the owner of any portion of this factor from securing for the use of its services an amount which exceeds that paid for other portions, by more than its superior efficiency. Thus if by reason of its nearness to market, the value of wheat produced on a given area exceeds that produced on a more distant area by $100, the owner of the more favorable location can secure

nearly or quite that much more rent than can the owner of the less favorable location. But should the rent demanded by the owner of the first area exceed that asked for the use of the other by more than $100, the second would become the preferable alternative and competition would force the rent of the first to fall. Furthermore, should the influence of monopolization ever enable the owner of situation to exact so large a share of product as to leave for the owners of the other factors, less than suffices to induce them to make their factors available for use, there would follow a decrease in the supply of those factors, with the result that the control of the owners of the remaining supply would increase, and with that would come the power on their part to secure a larger share in distribution.

105. So far as the return for situation alone is concerned, the minimum limit, *i. e.*, the lowest return that will suffice to induce the owner of a given situation to allow its use, may be very small. Indeed, in some instances, the owner of situation may allow it to be used without any return other than that which will maintain the efficiency of the land or other material associated with situation, for by so doing a demand may be devoloped that will later redound to his advantage. Thus the owner of situation in a sparsely settled section where the supply of situation relative to the demand therefor is very great, may consider it to his advantage to allow its use without recompense, hoping thereby to induce a movement of population thither and

ultimately to gain by the increased demand. In such cases there exists situation that brings no rent to its owner, though, strictly speaking, the owner invests present advantage for future gain. The returns which he would otherwise require for the use of his property, he invests in inducing others to come, in order that he may subsequently profit thereby, just as a merchant occasionally sells goods at or below cost in the hope of building up a more extensive trade.

No-rent situation will be found, if anywhere, on the margin of cultivation, *i. e.*, where the output of the productive process is so small that one can better afford to seek another field for his activity than pay for the use of situation there, as the amount remaining to him after such payment would be less than he could secure elsewhere. Indeed, in actual experience the conditions on the margin of cultivation are often such that he who undertakes cultivation there, must have the entire product in order to live and continue operations. But the existence of a no-rent situation on the margin of cultivation is not necessarily permanent. Should population increase to such an extent that all cultivable area becomes occupied and should the demand for commodities raise their price above the expense of production, no-rent situation might entirely disappear. No-rent situation is an incident to rent, not an essential feature thereof.

106. The fact that under some circumstances, situation may bring no return for its services and

that the owner of situation can obtain most or all of the difference in product that is due to the superior efficiency of his situation as compared with other situation which serves the same market, form the basis of the Ricardian doctrine of rent.

Rent as defined by Ricardo is "that portion of the produce of the earth, which is paid to the landlord for the use of the original and indestructible powers of the soil."[1]

The conditions that give rise to and determine rent are thus described: "On the first settling of a country, in which there is an abundance of rich and fertile land, a very small portion of which is required to be cultivated for the support of the actual population, or indeed can be cultivated with the capital that the population can command, there will be no rent; for no one would pay for the use of land, when there was an abundant quantity not yet appropriated, and, therefore, at the disposal of whosoever might choose to cultivate it." This description of the "ante-rent stage of cultivation" has been modified by subsequent exponents of the theory, who say: "If the track be held by a number of competing owners, each acting for himself, seeking his individual interest, no rent will be paid, or only a rent so small that for purposes of economic reasoning (*sic*) we may disregard it."[2]

"If," Ricardo continues, "all land had the same

[1] David Ricardo, *Principles of Political Economy and Taxation*, ed. by E. C. K. Gonner, p. 48, et seq.

[2] Walker, *Political Economy*, p. 194.

properties, if it were unlimited in quantity and uniform in quality, no charge could be made for its use, unless where it possessed peculiar advantages of situation. It is only, then, because land is not unlimited in quantity and uniform in quality, and because in the progress of population, land of an inferior quality or less advantageously situated, is called into cultivation, that rent is ever paid for the use of it. When in the progress of society, land of the second degree of fertility is taken into cultivation rent immediately commences on that of the first quality, and the amount of that rent will depend on the difference in the quality between these two portions of land."

"When land of the third quality is taken into cultivation, rent immediately commences on the second, and it is regulated as before, by the difference in the productive powers. At the same time, the rent of the first quality will rise, for that must always be above the rent of the second, by the difference between the produce which they yield with a given quantity of capital and labor. With every step in the progress of population, which shall oblige a country to have recourse to land of a worse quality, to enable it to raise its supply of food, rent on all the more fertile land will rise." To this exposition of the doctrine of rent, has been added the following important qualification: "All scientific reasoning about rent is based on the assumption that the tenant will leave the soil in as good condition as it was when he took it."[1]

[1] Walker, *Political Economy*, p. 195.

From this view of what rent is and of the conditions that give rise to it, the following law has been derived :

"1. Rent arises out of differences existing in the productiveness of different soil under cultivation at the same time, for supplying the same market.

"2. The amount of rent is determined by the degree of those differences. Specifically, the rent of any piece of land is determined by the difference between its annual yield and that of the least productive land actually cultivated for the supply of the market, under equal applications of labor and capital, it being assumed that the quality of the land as a productive agent, is, in neither case, impaired or improved by such cultivation."[1]

107. The place occupied by this doctrine of rent in economic theory is unique. Generally accepted without question, it forms the starting-point of most theories of distribution, and from it are drawn conclusions of the highest importance. It was long held that the principles governing rent are peculiar to it and inapplicable to the other shares. This view still prevails so far as interest and wages are concerned, but some hold that the principles governing profits are the same as those governing rent. Under these circumstances the Ricardian doctrine of rent merits further examination.

This doctrine rests upon four hypotheses: (1) that the supply of cultivable land of some sort is unlimited; (2) that the product which goes to renew the fertility of the soil is not rent ; (3) that differ-

[1] Walker, *Political Economy*, p. 197.

ences exist in the productive efficiency of land ; and (4) that competition is free to the extent that members of society know of the existence, location and character of land, and are able to act upon that knowledge.[1] From these hypotheses there follow two conclusions : (1) there exists under cultivation a body of no-rent land, and (2) the difference between the product on no-rent land and the product on other land under cultivation, assuming equal applications of labor and capital, constitutes rent. The share can be no more and no less.

Conceding the hypotheses upon which the Ricardian doctrine is based, the validity of the conclusions drawn is beyond question. But the significance of those conclusions, in so far as they are thought to throw light upon the nature and law of rent as compared with the other shares, disappears upon further analysis; for an assumption of the same hypotheses will give exactly the same law in the case of every share. Take wages for example. If it be assumed that the supply of labor is unlimited, and if from wages be excluded the amount necessary to renew the efficiency of labor, and if, further, differences in the efficiency of laborers be conceded and it be assumed that competition is free,

[1] The Ricardian doctrine of rent differs from that entertained in the present discussion in its concept of the nature of the factor for whose services rent is a return, but in considering the validity of the reasoning employed in support of that doctrine, its concept of rent as a return for the use of land may be accepted.

there will exist a class of no-wage laborers, *i. e.*, of laborers whose income no more than suffices to maintain them. Wages, then, under these assumptions, being the return for the use of labor over and above the amount required to maintain its efficiency, will equal the difference between the productive efficiency of no-wage labor and of labor above that grade, equal applications of capital and land being assumed.

Unreasonable as these conclusions may seem in connection with wages, they are equally as valid as those that constitute the Ricardian doctrine of rent. Moreover, from a scientific standpoint, in seeking to discover the laws according to which product is divided into shares, it is impossible to justify the use of hypotheses for the determination of one share that are not applicable equally to the others. The assumption of similar hypotheses will give a no-interest class of capital and a no-profit class of enterprise, for if the supply of these factors is unlimited, no one will pay more for the use of any portion of them than suffices to maintain its efficiency, unless it is of exceptional productive capacity.

When the Ricardian doctrine of rent is examined closely, it becomes evident that all that it seems to demonstrate is assumed in its hypotheses. If the assumption that the supply of land is unlimited, which is contrary to fact, is eliminated, and rent is interpreted, as defined in the Ricardian theory, to include *all* of product that goes to the

owner of land, whether as a direct payment or indirectly through its application to renew productive efficiency, there remains of the Ricardian doctrine of rent, the fact, not that rent arises out of differences in the productivity of land and equals the difference in product resulting therefrom, but that where land of different quality is utilized for supplying the same market, assuming that the efficiency of the other factors employed remains the same, nearly or quite all the difference in product arising from differences in the efficiency of land, will go to the owner of land, because under the existing conditions the owners can avail themselves of monopolization to that extent. This, however, as has been seen, is true of the returns for the use of any one of the factors.

108. One of the most important deductions from the Ricardian doctrine of rent is that "rent is not a component part of the price of commodities."[1] By this is meant, not that where rent exists it does not come out of the price paid for the commodities, but that price does not depend in any way upon rent; that, on the contrary, rent depends upon price, so that high rent is not the cause of high prices, but is itself the result of high prices. In support of this, it is said that there will not normally be two prices for commodities in the same market, and that the price of any commodity must be high enough to pay for its production under the most unfavorable conditions which it may be found

[1] Ricardo, Ibid., p. 55.

necessary to utilize to meet existing demand. If, now, the product required to maintain the efficiency of land is excluded from rent, and it is assumed that competition prevails to the extent of reducing price to cost of production and that the supply of land is unlimited, so that when the demand for a commodity raises its price, new land is brought into cultivation, the product from which suffices only to pay current wages, interest and profits, and to maintain the efficiency of land, the conclusions follow: (1) that no rent comes out of the price of those commodities that are produced on new land, for by hypothesis no rent exists there, and (2) that the reason why rent comes to be paid for any land is that the prices of commodities increase.

The validity of these conclusions, it will be observed, rests upon the same hypotheses as does the Ricardian doctrine of rent. The price of a commodity must undoubtedly be sufficient to pay for its production under the most disadvantageous conditions necessary to be utilized for the supply of existing demand. But since the supply of land is limited, it may be that the cost under those conditions will include rent, even when the product that is used to restore the efficiency of land is excluded from that category. When, however, this product is included in rent, as it should be if rent is to be considered to include all of the return to the landlord for the use of land, as the Ricardian theory defines it, it will follow that even where the supply of land is beyond the immediate needs of society, there is

always some rent for land that is cultivated, hence rent will form a part of price even under these circumstances.

But the conclusion is still valid, that in any given case, general prices do not depend upon rent. The price of any commodity at any time, assuming the value of the measure to be constant, depends upon the status of the supply of and the demand for the commodity; hence the price of the commodity bears no necessary relation to the price that was paid for the use of the factors in producing it. But if new supplies of the commodity are to be forthcoming, a price must be paid that will at least cover the cost of production, which will include enough to renew the efficiency of the factors. Moreover, since competition among the owners of the factors does not alone determine the condition of their availability, for the supply of the factors is not unlimited and the purchaser of their services has not always at his disposal an alternative, it may happen that the condition of renewing the supply of the commodity will involve the payment for the use of one or more of the factors, of an amount above that required to renew the factors, in which case the price of the commodity must be correspondingly high. So that, while the shares do not determine the price of existing commodities, they influence that price, for they affect future supply. The relation of rent to price, however, is not different in principle from that of interest, profits and wages.

109. Another important deduction from the Ricardian theory of rent is that rent represents an "unearned increment," since it is due, not to the efforts of the producer, but to the demand of the consumer. From this it is sometimes concluded that since rent is created by society, it should go to society.

The question as to whether society should appropriate the so-called "unearned increment" does not pertain to this discussion. It should, however, be pointed out that consistency in the application of such a policy would require society to appropriate whatever portion of any of the shares is due to the superior quality of the factor for whose services it is a payment, in so far as that superiority is not the sole result of the efforts of the owner of the factor. Differences in quality result in differential gains to the owner of capital, enterprise and labor, as well as to the owner of land or situation. Moreover, if society is to appropriate for the general good, all of the value of every commodity that results from the demand of others than the producer thereof, it is difficult to see where the limit would be drawn between the "earned" and the "unearned" increment, for under a system of division of function, most of the value of what each produces is due to the demand of others than himself. Under modern business organization, that portion of the value of a commodity which is not due to social demand, would not suffice to pay even the cost of production.

6

INTEREST

110. Interest is the return to the owner of capital for the services thereof. The amount of this share is determined according to the general principles of distribution which, as applied to interest, may be thus stated:—Interest depends primarily upon the value of the services of capital; the value of the services of capital depends upon the relation of the supply thereof to the demand therefor. The amount of interest received by the owner of capital at any time is determined by the competitive and monopolistic conditions prevailing in connection with the

Walker, *Political Economy*, Pt. IV., chapter iii.; Ely, *Outlines of Economics*, Bk. II., Pt. III., chapter vi.; Clark, *The Distribution of Wealth*, (see index); Gide, *Political Economy*, trans., Bk. IV., Pt. II., chapter iv. (iv.); Marshall, *Principles of Economics*, Bk. VI., chapters vi.–viii.; Laughlin, *Elements of Political Economy*, chapter xvii.; Mill, *Principles of Political Economy*, Bk. II., chapter xv.; Sidgwick, *Principles of Political Economy*, Bk. II., chapter vi.; Böhm-Bawerk, *Positive Theory of Capital*, trans., Bks. VI., VII.; Pantaleoni, *Pure Economics*, trans., Pt. III., chapter iii.; Roscher, *Political Economy*, trans., Bk. III., chapter iv.; Von Wieser, *Natural Value*, trans., Bk. III., Pt. III.; Bk. IV., chapters i.–viii.

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sale of the services of capital. The normal downward limit to interest is the smallest amount that will suffice to induce the owner of capital to permit its use, for if through the influence of competition among the owners of capital, interest does not equal this amount, capital remains idle and the decrease in the available supply of capital tends to check the fall in interest. The normal upward limit to interest is the difference between the total product and the minimum shares of rent, profits and wages. For if through monopolization by the owners of capital, interest increases so as to encroach upon the minimum limits of some of the other shares, there will follow a decrease in the available supply of the factors involved. This will lead either to an increase in the shares that have fallen below the minimum or to an impairment of the efficiency of production, a condition that in itself will tend to diminish interest by decreasing the amount of wealth available for distribution.

111. The difference between interest as here defined and the view often found in economic theory, is due to differences in the concept of capital. Capital has been variously defined as wealth employed in producing more wealth, or as wealth that may be so employed, or as wealth that is intended to be so employed. These definitions, however, agree in excepting from capital, wealth in the form of unimproved land and natural agents, which are set apart as a distinct factor of production. Capital as here conceived consists of material,[1]

[1] See §§ 44, 103.

whose function it is to embody want-attracting power. According to this view, the free gifts of nature, such as soil and other raw materials, are as truly capital as are the raw materials that man has improved; and the return for the use of soil as well as for the use of other forms of material, is economic interest.

Interest in the commercial sense is a payment for the control of a certain amount of value. As so viewed, interest is contrasted to commercial rent, which is a payment for the use of specific portions of wealth.[1] Thus, according to the popular view, if a man borrows a piece of land, a building and machinery, for the purpose of operating a manufacturing establishment, he pays therefor rent (here designated commercial rent); while if he buys these on credit, he pays interest (here designated commercial interest). In the former case, it is expected that at the end of a certain period, the specific commodities will be returned, with a recompense for their use; while, in the latter case, it is expected that at a given time the borrower will pay the purchase price of the commodities, together with a sum which will recompense the lender for the use of this wealth. From an economic standpoint, however, both cases involve a loan of capital, *i. e.*, of material, and the amount paid for the use thereof is interest.

As a rule the borrower of capital in actual busi-

[1] See § 103.

ness receives a quantity of money (or a title thereto) with which he purchases commodities, or he buys commodities on credit. The common practice of employing money in loaning capital tends to conceal the real economic character of the transaction. For it leads to the inference that loaning capital is synonymous with loaning money, whereas what the borrower really wants is a supply of commodities. Money in such transactions is but the means through which the sale of the services of capital is made. In the case of a purchase of commodities on credit, the economic character of the transaction is still further obscured by the fact that the amount to be paid for the use of capital, *i. e.*, the interest, is merged in the prices of the commodities, which either are graded according to the length of credit determined upon, or, more often, are fixed on the assumption that payment will be deferred for a specified time, while discounts are offered for earlier payment. Thus, in ordinary business, goods are often sold on the basis of payment in 90 days, and discounts, varying in amount, are given for cash payment or for payment in 30 or in 60 days.

The real difference between economic and commercial interest resembles the difference between economic and commercial rent, in that some of the return made for the use of capital as popularly viewed, often constitutes, from a scientific standpoint, rent or return for situation, just as some of what is known in business as rent, in economic science is interest. For example, if one buys a

house and lot on credit, or through the use of money which he has borrowed, commercially speaking, the entire payment that he makes for the use of the credit is interest, whereas from an economic standpoint it is a combination of interest and rent. A portion of the credit represents the value of situation, and so much of the payment as constitutes a return for this, is rent; the remainder, consisting of the return for the use of capital, is interest. In a similar manner, as has been seen, that which the lessee of a house pays is, commercially speaking, rent, while in economic science it consists of both rent and interest. The portion that goes for the use of economic capital is interest; the balance, being a payment for the use of situation, is rent. But economic and commercial interest are alike in this, that however capital may be defined, the return for its use depends upon the relation between the supply thereof and the demand therefor.

112. While situation is immovable and, therefore, subject to fluctuations in supply only as population changes or as the facilities for transportation are altered, capital in many of its forms possesses a high degree of mobility. Wheat is transported from the fields of Dakota, Argentine Republic and India to England; cotton, grown in Texas or India or Egypt, is manufactured in England; the tea of China and the coffee of Brazil find markets in every quarter of the globe; and these are but types of many forms of capital. The effect of this trans-

ferability of capital is a tendency to equalize the relative influence of competition and monopolization in determining interest in different places, with the result that the returns for the use of capital of the same quality tend to be the same regardless of the location of the demand for it. For should the demand for capital in one place exceed that in another, thus leading to a higher return for its use in the former locality, capital will tend to flow to that place where the return is highest and away from the locality where the return is lowest, with the result of equalizing the relation between demand and supply in both places.

Important as is the mobility of capital, its equalizing influence upon rates of interest represents at most but a tendency. Various circumstances may lead to different returns for capital in different localities, and, indeed, for different portions of capital in the same locality. Thus the general industrial condition and the political status, as affecting the certainty of investments and the security of contracts, exert a marked influence upon interest. In old communities, where business conditions are settled and legal institutions are well established, industrial undertakings will give a comparatively sure, if small, return, and contracts will be promptly and surely enforced. The return for the use of capital will tend to be less in such places than in new regions where business ventures involve greater uncertainty and where, law and order being less firmly established, the fulfillment of contracts is less sure. The larger

returns for capital received under these conditions has been considered by some as a distinct share, called premium for insurance.[1] Fundamentally, however, it is a difference in amount paid due to differences in the relation of the supply of capital to the demand therefor. When returns for the use of capital are more certain, the supply available relative to demand will be greater than when such returns are less certain, hence the interest will be lower under the former than under the latter conditions.

Variations in the return for the services of capital may be caused also by variations in the degree of mobility of capital. Though capital in many of its forms possesses a high degree of mobility, it is, of course, not capable in any event of absolutely free movement, and, under some conditions, it cannot be transferred from one industry to another except at great loss. This is especially true of investments in railroads and other industries involving large amounts of fixed capital. Such capital in the form of iron and other raw materials may possess a high degree of mobility before being so invested, and but little afterward. Hence, when conditions favor high returns to these investments, the supply of capital can be increased with comparative ease; but once invested, a falling off in returns cannot be followed readily by a decrease in the supply, for the materials used in such

[1] Walker, *Political Economy*, p. 225.

industries become from the fact of such investments, less adapted to others.

Such differences in the returns for the use of capital as are due to varying security for the loans, manifest themselves in the rate of interest. Thus a well established government can now borrow at the rate of from 2% to 3%; and capital for use in private industry, in well established communities where the security offered is good, brings only from 3% to 6%; while capital in new communities where the risk is greater, may bring from 10% to 15% or even more. On the other hand, variations in the returns for capital which are due to differences in mobility, may or may not show themselves in the rate of interest. Whether they do or do not, depends upon the method employed for estimating interest. Where it is estimated on the basis of an original investment, differences in interest will manifest themselves in the rate, as in the case of dividends on stock, a portion of which constitutes interest. But instead of affecting the rate, the influence of varying returns may show itself in the valuation of the capital itself, as would be the case if the capital were sold, when it would be valued by capitalizing its earning capacity at the current rate of interest.

113. The normal minimum limit to interest is the smallest amount that will suffice to induce the owner of capital to make it available. In many cases, until capital has become fixed in a permanent investment, there is offered to the owner the alter-

native of consuming it in the final satisfaction of his wants, in which case, except as this fits him for more efficient service, future production will suffer. To maintain and increase the capital fund of society, the return to the owner of capital for its use, must be sufficiently large to induce him to prefer to employ it in other ways than in the satisfaction of his final desires.

In general, the more permanent the nature of an investment, the more intense will be the competition between industries, when they serve the same demand; and because of this, interest on the capital that becomes fixed, may be forced far below the cost of reproducing it. Indeed, on the principle that some return is better than nothing, competition may drive the returns of such investments almost to the cost of conducting the business. And though a limit to the influence of competition in lowering the returns in these industries may be set by the possible gain from a transfer of the capital to some other industry, it not infrequently happens that, in the hope of driving the competitor from the field and of ultimately increasing the gain, the struggle between rivals becomes so intense that interest entirely disappears. In the long run, however, interest can not remain below the cost of renewing the efficiency of capital, for when interest falls below this, the process of production is impaired and economic decay sets in.

There is also a maximum limit to interest, which is fixed by the minimum limits of the other shares.

Should the owners of capital be able to increase the price of its use so as to encroach upon the minimum limits of the other shares, the borrowing of capital would become unproductive to the borrower. A reduction in interest would then follow either through a decrease in the demand of the borrowers or through an impairment of the productive process, which would decrease the fund available for distribution.

114. As the return for the use of capital depends upon the relation of the supply of capital to the demand therefor, and the process of borrowing is often effected through the use of money, a belief exists that interest depends upon the amount of money. A large supply of money is supposed to result in low rates of interest, while a high rate of interest is supposed to indicate a scarcity of money. Because of this opinion, there arises, not infrequently, a demand that the supply of money shall be increased in order to enable borrowers to secure the use of capital at less expense.

At the basis of this demand, is the mistaken idea that in borrowing one desires primarily money, whereas the fundamental desire is for commodities. "The amount to be paid for the use of capital will depend upon its abundance compared with the occasion for its use. The issue of money will not increase the number of horses and cattle and plows nor will it build shops and warehouses or construct machinery for manufacture or transport. If the people of a community be thriving and progressive, the demand for capital to start new enter-

prises or to enlarge those already established, will be very great. If the community be, also, young, having brought to new fields the social and industrial ideas, tastes and ambitions of an old society, the supply of capital will be scanty, and the rate of interest will rule high.[1]''

Moreover, the misfortune involved in a condition where a high rate of interest prevails does not consist primarily in the high rate but in the scarcity of capital, an evil which the high rate tends to remedy, since it will induce men to apply less wealth to the gratification of their immediate desires, thereby rendering more wealth available for application in other directions.

On the other hand, ''a low rate of interest may mean that, in a thriving, progressive community the accumulation of capital has gone on so rapidly as to outrun the occasions for its productive use. It may mean that the people are so dull, indolent and unambitious, or the state of society so disordered, that commercial and manufacturing enterprises are not undertaken, and no enlargement of traditional industries is looked for. A small amount of capital more than suffices for such scanty needs.''[2]

It will not suffice, however, to dismiss the question of the relation of money to interest with the statement that interest is not *determined* by the supply of money. For the supply of money affects

[1] Walker, *Political Economy*, p. 220 et seq. [2] Ibid, p. 221.

the facilities for transferring ownership and thereby influences the relation of the supply of and the demand for capital. Hence the supply of money affects interest. While an issue of money is not identical with the production of "horses and cattle and plows" or with the building of warehouses or the construction of "machinery for manufacture and for transport," the productive operations are all affected by the monetary system. It is important to emphasize both that the rate of interest is not determined by the supply of money and also that it is not independent of the supply of money.

The theory that the rate of interest is independent of the supply of money is based upon the assumption that prices of commodities will change with changes in the supply of money, and that the general conditions of the supply of and the demand for capital are not affected by such changes in the prices of commodities as result from changes in the supply of money. The borrower desires to secure a certain amount of value, and since price is but the estimate of the value of one commodity in terms of some other, it would seem to follow that if the supply of the other commodity increases, thereby decreasing its value, the price of the first commodity will increase accordingly, even though its value remains the same. After such a change in the value of the measure, the price of that which is borrowed is greater, but if its value remains the same, the rate of interest is unchanged. Thus, suppose a

manufacturer of clothing desires to borrow 1,000 yards of cloth, for the use of which he is willing to pay 50 yards, *i. e.*, 5 per cent. If at a given supply of money the price of that cloth is $1.00 a yard, he will borrow $1,000 and pay therefore $50. If now as a result of an increase in the supply of money, its value decreases one-half, while the value of the cloth remains the same, the price of a yard of cloth (in terms of money) will become $2.00. And to secure 1,000 yards, the manufacturer must borrow $2,000, for the use of which he gives 50 yards or $100, which is, as before, 5 per cent. To the extent, then, that changes in the supply of money are followed by changes in the prices of commodities which correspond exactly to the changes in the value of money, *while other conditions remain unchanged*, the rate of interest remains the same.

When, however, the conditions assumed as the basis of the theory that interest is independent of the supply of money, are compared with the actual workings of the economic process, it will be found that changes in the supply of money which do not affect the rate of interest are the exception rather than the rule. On the one hand, there is at any given time a large body of prices that are unaffected by changes in the value of money, for the prices involved in credit transactions are fixed. Hence in so far as the demand for capital is a demand for wealth to meet existing obligations, changes in the supply of money will affect the rate of interest, in accordance with the general law of

value. And, even though the entire influence of changes in the supply of money were exerted through the relation of money to contracts, the effect of such changes on the rate of interest, would not stop with the contracts themselves, because the conditions affecting the liquidation of existing contracts influence the formation of new ones. The demand for any and every commodity and, therefore, the demand for capital in all its forms, are affected by such changes in the supply of money as alter the conditions of the fulfillment of obligations.

But the influence of changes in the supply of money on interest is not limited to that which is exerted through contracts. Changes in price, whether due to changes in the value of commodities or to changes in the value of money, affect directly the demand for and the supply of commodities. Hence changes in price, from whatever cause, affect the demand for the capital required to produce commodities, and, through this, the interest upon such capital. Business may be hampered by an inadequate or a superabundant supply of money, through which ownership in values is transferred, just as truly as by an inadequate or superabundant supply of railroads, through which the commodities themselves are transported; and whatever impedes or promotes business, affects the demand for the factors of production and, therefore, the returns for the services of these factors.

While, however, changes in the supply of money

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affect interest through their influence upon business conditions, it is not to be inferred that interest can be controlled by arbitrary readjustments of the supply of money. It is absolutely impossible to foretell the effects of changes in the supply of money upon interest, because it is impossible to foretell the effect of a given change in the supply of money upon the relation between demand and supply as they concern capital. An increase in the supply of money by increasing prices may quicken business activity and promote economic prosperity, thereby enlarging the demand for capital and increasing the interest returns therefor; but if the supply of money exceeds the needs of business, it leads to inflation of prices and disaster, followed by a decrease in the demand for capital. On the other hand, the increase in prices resulting from an increase in the supply of money, may lead to such a decreased demand for commodities by purchasers as to decrease the demand for capital and lower the interest thereon. A decrease in the supply of money may produce exactly the opposite effects, leading to lower prices and business contraction, partly or wholly offset by increased demand for commodities because of low prices.

There is no more important or certain teaching of economic experience than that the attempt arbitrarily to adjust the supply of money to the needs of business cannot succeed. An adequate monetary system must contain within itself the capacity to increase and decrease the supply of money according to changes in the demand for it.

7

PROFITS

115. Profits are the return to the possessors of enterprise for the services thereof. The principles of distribution as applied to profits may be thus stated:—Profits depend primarily upon the value of the services of enterprise; the value of the services of enterprise depends upon the relation of the supply thereof to the demand therefor. The amount of profits received at any time is determined by the competitive and monopolistic conditions prevailing in connection with the sale of the services of enter-

Walker, *Political Economy*, Pt. IV., chapter iv.; Laughlin, *Elements of Political Economy*, chapter xx.; Clark, *The Distribution of Wealth*, (see index); Gide, *Political Economy*, trans., Bk. IV., Pt. II., chapter ii.; Ely, *Outlines of Economics*, Bk. II., Pt. III., chapters v., vi.; Pantaleoni, *Pure Economics*, trans., Pt. III., chapter iv., § 5; Roscher, *Political Economy*, trans., Bk. III., chapter v.; Marshall, *Principles of Economics*, Bk, VI.; chapters vii., viii.; Mill, *Principles of Political Economy*, Bk. II., chapter xv.; Sidgwick, *Principles of Political Economy*, Bk. II., chapter ix. See also in the *Quarterly Journal of Economics*, Vol. vii., 459–479, "The Risk Theory of Profit," and Vol. xv., 75–105, "Enterprise and Profit," by F. B. Hawley; and Vol. ix., 409–449, "Risk as an Economic Factor," by John Haynes.

prise. The normal downward limit to profits is the smallest amount that will suffice to induce the possessor of enterprise to make it available; for if through the influence of competition among the possessors of enterprise, profits fall below this point, enterprise remains idle, and the decrease in the available supply of enterprise tends to check the fall in profits. The normal upward limit to profits is the difference between the total product and the mininum shares of rent, interest and wages. For if through monopolization by the possessors of enterprise, profits are increased so as to encroach upon the mininum limits of the other shares, there will follow a decrease in the available supply of the factors involved. This will lead either to an increase of the shares that have fallen below the mininum or to an impairment of the efficiency of production, a condition that in itself will tend to diminish profits by decreasing the amount of wealth available for distribution.

116. The fact that profits are the return to the owners of enterprise for the services thereof and that they are determined by the relation of the supply of enterprise to the demand therefor, is obscured by the process through which the owner of enterprise receives his share. Before the development of the economic organization had resulted in differentiation of the ownership of the various factors, each producer was the possessor of the situation, capital, enterprise and labor employed in his industry. Under such an arrangement each indi-

vidual owned the product of his industry, and his share depended directly upon the value of that product. It was impossible to say how much of this product constituted the several shares, rent, interest, profits and wages. The same is true of many business undertakings today, and especially of such as are conducted on the margin of cultivation, *i. e.*, where the total product is required to pay the expense of production. The amount of the various shares under such circumstances can be estimated only, by assuming that each equals that which is received where the factors are owned by different persons, an assumption that must necessarily remain purely hypothetical.

Through the process of differentiation of the ownership of the factors, it has resulted that the services of situation, capital and labor have become objects of direct purchase and sale, while the owner of enterprise retains the status of the producer in the earlier condition, in that he owns the output of the productive operation, subject to such liens as are involved in his obligations to the owners of the other factors. Hence the owner of enterprise receives his share through the sale of the commodity produced and after payment, from the proceeds of such sale, of the amounts due the owners of situation, capital and labor. The process of buying and selling enterprise is involved in the buying and selling of general commodities. But this peculiarity of the method of remunerating the services of enterprise does not prevent the work-

ing of the law of supply and demand in determining profits. So far as any given undertaking is concerned, the owner of enterprise is the residual claimant, *i. e.*, he pays the expenses, consisting of the returns for situation, capital and labor, and then takes what is left. But it is not to be inferred from this, that the amount which goes as profits is the result of chance. Unless the remuneration for the services of situation is sufficient to induce the possessor of enterprise to undertake an industry, there is no demand for and, therefore, no return to the other factors. Much uncertainty may attend the amount of profits so far as any individual enterprise is concerned, but in the long run a portion of product must go to the possessor of enterprise.

The nature of enterprise is such that the supply is not easily increased to meet demand. This fact tends to emphasize the influence of monopolization in regulating the returns for the services of enterprise. Especially is this true in the case of new undertakings, whether they involve the production of a new commodity, or the extension of the scope of existing industries. To interpret accurately the conditions of supply and demand and to adjust the one to the other, when it is proposed to essay the production of a new commodity or to put into operation an undertaking of great size, where the possibilities of failure are increased by the complexities and vastness of the organization and the variety of the elements involved, require enterprise of a high order, the supply of which is

not susceptible to increase by the mere increase of population. Hence the possessors of such enterprise exercise a large power of control in the sale of its services. And as the importance to economic progress of changes in the nature and magnitude of undertakings increases, the demand for enterprise increases, and with it the necessity of giving for the services of enterprise such an amount of product as shall attract an adequate supply thereof.

Another important characteristic of enterprise is found in the variety of grades in which it appears. Some degree of enterprise, as has been observed, is inseparable from all activity, but there is a vast difference between the enterprise that leads one to act where the task is simple and the returns wellnigh sure, as in the case of the ordinary forms of labor, and that which is required in the large railroad and mercantile operations of modern industry. These differences in the grade of enterprise result in differences in the returns for the services of enterprise. The amount of profits that suffices to pay for the enterprise involved in running a small country grocery store and that which affords the proper remuneration for the enterprise essential to a transcontinental railroad are vastly different. But the difference between the profits actually accruing from such undertakings is not greater than the difference between the value of the services of the enterprise involved.

The minimum of profits is the smallest amount

that will induce the possessor of enterprise to act. If economic efficiency is to be maintained, profits must suffice to maintain the efficiency of enterprise. But in very many instances, the possessor of enterprise supplies also the labor and perhaps the capital and situation, and may engage in business for himself merely because of the satisfaction arising from being an independent producer, even when the total income so obtained is no larger than he could get by selling to others the use of his situation, capital and labor. Under these conditions the gratification of the desire to be one's own employer constitutes part of the return to the possessor of enterprise, while the amount of each of the several shares, as has been said, cannot be distinguished.

117. The existence of marked differences in grades of enterprise, and the fact that, under some circumstances, a very low minimum of profits suffices to induce enterprise to act, have led to a theory of profits akin to the Ricardian doctrine of rent, and called after that, the "rent theory of profits."[1] According to this theory, if (1) "the number of men of exceptional abilities were sufficient or more than sufficient to do all the business that required to be done, of all sorts and in all places; if (2) these men, however much surpassing all other members of the industrial society, were themselves equal in all respects which concern the conduct of business;

[1] Walker, *Political Economy*, p. 232 et seq.

and if (3) this class, so constituted and so endowed, were distinguished from all not of their class so clearly and conspicuously that no one having these exceptional abilities should fail to be recognized, and no one lacking such abilities in the full measure should esteem himself capable of conducting business, or be so esteemed, for the purpose of obtaining credit, we should have a situation closely analogous to that * * in the case of a community near which was found an amount of good land, of uniform quality, adequate, or more than adequate, to raise all produce required for the support of the community."

In the absence of combination among the members of this class, competition, it is said, will bring their return "to so low a point that the remuneration *of each and every one of this class would be practically equal to what he would receive if employed by another.*[1] This, which we might call the no-profit stage of industrial society, corresponds closely to the no-rent stage in the cultivation of the soil. The persons remaining in the conduct of business, would earn their necessary subsistence and no more."

As a matter of fact, however, there are wide differences in business ability, from "those rarely gifted persons, who, in common phrase, seem to turn everything they touch into gold," to "the multitude of men who are found in the control of

[1] Not italicized in the original.

business enterprises for no good reason; men of checkered fortunes, sometimes doing well but more often ill." Those of this lowest order of ability constitute the "no-profit" class of employers, who live "partly by legitimate toll upon the business that passes through their hands, partly at the cost of their creditors, with whom they make frequent compositions, partly at the expense of friends, or by the sacrifice of inherited means. This bare existence, obtained through so much of hard work, of anxiety and often of humiliation, we regard as that minimum which in economics, we can treat as *nil* (*sic*). From this low point upwards we measure profits."

From this theory there might be formulated the following law of profits, adapted from the Ricardian law of rent:—

1. Profits arise out of differences existing in the productiveness of different portions of enterprise in use at the same time for supplying the same market.

2. The amount of profits is determined by the degree of those differences. Specifically, the profits from any undertaking are determined by the difference between the efficiency of the enterprise involved and the least efficient enterprise in use to supply the same market, under equal applications of situation, capital and labor, it being assumed that the quality of the enterprise as a productive agent is, in neither case, impaired or improved by such use.

118. This theory is open to substantially the

same criticism as the Ricardian doctrine of rent. It will be observed that the "no-profits" employer is either one whose profits are very small, in which case the theory proposes to ignore them altogether, in entire disregard of the requirements of scientific investigation, or he is an employer whose income is "practically equal to what he would receive if employed by another," *i. e.*, to what he would secure as a laborer. The fallacy involved in declining to call a share profits, when it is return for the services of enterprise, just because the amount is no more than could be secured as wages, is apparent. If, as the "rent theory" assumes, profits are remuneration for organizing and conducting production,[1] then the portion of product that goes to pay for this service should be called profits whether it is large or small. Moreover, for scientific purposes, it must be recognized in whatever form and to whatever extent it exists.

The essential truth in the rent-theory of profits is the same as that which remains to the Ricardian doctrine of rent after the hypotheses have been reduced to conform to facts and the definition of the share is interpreted in harmony with the definitions of the other shares, so as to include all the return for the services of enterprise. Differences in efficiency exist in enterprise as in the other factors, with the result that those possessing the higher grades can avail themselves of monop-

[1] Walker, *Political Economy*, p. 232.

olization to the extent of securing most or all of the increase in product that results from their increased efficiency. But this, as has been seen, is equally true of all the factors of production, though the fact may sometimes be concealed by the method of estimating the shares.

119. The rent-theory of profits resembles the Ricardian doctrine of rent also in the conclusion drawn from it as to the relation of profits and prices. "Profits," it is said,[1] "do not form a part of the price of manufactured products," by which is meant, as in the case of rent, that the price of commodities produced under the most unfavorable conditions actually employed, does not include any profit because no profit exists there. And since the price under such conditions determines the price everywhere, profits do not form a part of any price. The basis of this conclusion is the assumed existence of no-profit enterprise, an assumption that is contrary to fact. Indeed, the same criticism that was made against the similar conclusion in connection with rent, applies here.[2]

It is undoubtedly true that the price of any commodity at a given time does not depend upon profits, nor does it depend directly upon any or all of the shares. Price is a comparative estimate of values and these depend upon the relation of the supply of to the demand for the commodities concerned. In general, too, the shares depend upon prices

[1] Walker, *Political Economy*, p. 239. [2] See § 108.

rather than prices upon the shares. Where commodities are produced for sale, the amount to be distributed among the owners of the factors is the amount received from such sale. Moreover, in actual business, profits are more directly affected by variations in the prices of commodities than are the other shares; for rent, interest and wages are often paid out of wealth which has been advanced for that purpose, while the receipt of profits may wait upon the sale of the commodities produced. But, as has been seen, if new supplies of any commodity are to be forthcoming, the price received at any given time must be sufficient to pay the rent, interest, profits and wages, which are necessary to secure the activity of the factors. So that the prices of commodities are influenced by the shares, for these affect the future supply of and demand for commodities.

The attempt to show that prices are independent of profits and a somewhat similar attempt to show that profits cannot normally affect wages,[1] result apparently from a desire to justify the existence of profits and to demonstrate that the laborer suffers no loss in wages because of profits. The existence of profits should require no justification. The services of enterprise are indispensable to production, and while the justice of allowing a return therefor is primarily a question of ethics, it may here be remarked that it would be a strange code

[1] See infra.

of ethics that would deny to the possessor of enterprise the right to a return for its services. Whether profits can be increased at the expense of wages or of any other share depends upon whether the possessors of enterprise can obtain such a control over its supply as, through the influence of monopolization, to secure some of product that would otherwise go as wages or as some other share.

120. In judging of profits and of their relation to total product in any given case, account must be taken of the method employed to estimate profits. In this connection it is necessary to distinguish between the rate of profits reckoned as a percentage of the value of the investment, the rate reckoned as a percentage of the price of a single commodity and profits as the portion of the total output of a given industrial operation that goes to the possessor of enterprise. In business transactions the first two methods are most commonly employed. Thus, if an industry with an investment of $100,000 yields $10,000 profits, the share is said to be 10%. This estimate is useful for comparing the returns to enterprise in different industries or in the same industry at different times, but it does not enable one to judge of the relation of profits to the other shares, nor of the sufficiency of profits in relation to economic efficiency. To decide these questions it is necessary to consider the character of the industry, and the amounts that go as returns for the other factors. The element of time also must be taken into account. The opinion as to the adequency of the

profits in the illustration given, will vary materially according as the sum received represents the returns accruing in a month, a year or ten years. If the $10,000 represents a month's return, it will be considered high; if it represents a year's income, it will be considered good or fair according to the nature of the business; but if it represents the return for ten years, it will probably be considered insufficient to warrant the continuance of the business, unless this is necessary to save the investment. Again, if a commodity that sells for $1.00 returns a profit of 50 cents, the rate, 100%, seems to be very high. If, however, the sale of one such commodity took all the service of one man's enterprise for a day, such profits would not attract a very high order of enterprise.

Moreover, in estimating the total outlay that society makes to secure the enterprise requisite for the economic process and in comparing this with the remuneration for the services of the other factors, too much stress should not be laid upon the large amount of profits that may be received in individual instances. Business under modern economic conditions is highly speculative, and the loss in case of failure is often very great. The total amount that goes to enterprise must be sufficient in the long run to insure against failure, else the probability of loss may outweigh the probability of gain and society will suffer from industrial stagnation. Without attempting to decide here the question as to whether profits are excessive, it may

confidently be affirmed that much of the belief that such is the case, arises from ignorance as to the extent to which failure and loss attend the attempt to launch business undertakings. Success is heralded, while, so far as possible, failure is concealed.

The correct basis for deciding as to whether society, under the prevailing system of distribution, is compelled to pay too much for the services of enterprise, is neither the absolute nor the relative incomes of its members, but the relation between what it secures from enterprise and what it pays for it. If an equally efficient enterprise can be secured at a lower price, too much is being paid for the services of this factor under present conditions; if, however, a decrease in profits would result in lessening the efficiency of enterprise, then the present payment therefor is not excessive, however large may be the amount received by those who supply the service.

8

WAGES

121. Wages are the return for the services of labor. The principles of distribution as applied to wages may be thus stated :—Wages depend primarily upon the value of the services of labor; the value of the services of labor depends upon the relation of the supply thereof to the demand therefor. The amount of wages received in any given case is determined by the competitive and monopolistic conditions prevailing in connection with the sale of the services of labor. The normal downward limit to wages is the smallest amount that will induce men to work, for if through the influence of competition

Walker, *Political Economy*, Pt. IV., chapters v., vi.; Gide, *Political Economy*, trans., Bk. IV., Pt. II., chapter iii.; Taussig, *Wages and Capital;* Clark, *The Philosophy of Wealth*, chapter viii.; *The Distribution of Wealth* (see index); Laughlin, *Elements of Political Economy*, chapters xviii.–xxi.; Ely, *Outlines of Economics*, Bk. II., Pt. III., chapter iii.; Pantaleoni, *Pure Economics*, trans., Pt. III., chapter v.; Roscher, *Political Economy*, trans., Bk. III., chapter iii.; Sidgwick, *Principles of Political Economy*, Bk. II., chapters viii., ix.; Marshall, *Principles of Economics*, Bk. VI., chapters ii.–v.; Mill, *Principles of Political Economy*, Bk. II., chapters xi.–xiv.

among laborers, wages fall below this point, men remain idle and the decrease in the available supply of labor tends to check the fall in wages. The normal upward limit of wages is the difference between the total product and the minimum shares of rent, interest and profits, for if through monopolization by laborers, wages increase so as to encroach upon the minimum limits of some of the other shares, there will follow a decrease in the available supply of the factors involved. This will lead either to an increase in the shares that have fallen below the minimum or to an impairment of the efficiency of production, a condition that in itself will tend to diminish wages by decreasing the amount of wealth available for distribution.

122. In actual business, labor is never active without some degree of enterprise, for it requires some enterprise to put into operation any undertaking, even that of utilizing one's labor-power for production. This is true of the simplest forms of activity, such, for example, as where the process of want-satisfaction requires only the appropriation of fruits, water or fuel, which exist in such abundance that they may be had for the taking. From this it follows that a pure economic wage, *i. e.*, a return for the services of labor wholly distinct from the other shares, exists only where the value of the services of the enterprise involved amounts to nothing. Such a condition, absolutely speaking, does not exist. But for business purposes, the value of the services performed by enterprise in any given case

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may be so small as to be ignored in actual transactions, just as the carpenter ignores the indefinitely small differences in length, which are, at the same time, important in the effort to discover the fundamental principles upon which the carpenter bases his acts. Commercial wages, then, differ from economic wages in that the former contain at least a modicum of profits. This fact, however, does not prevent the recognition of the principles which govern economic wages, principles that regulate also the wages in actual business.

Moreover, in seeking the principles according to which wages are determined, a distinction must be recognized between the total amount of wages accruing in a given undertaking and the rate of wages for individual laborers. The former refers to the total amount of product that goes to pay for the services of labor as compared with the amount that goes to pay for the services of the other factors, situation, capital and enterprise ; while the rate of wages refers to the proportion of total wages received by individual laborers. The two questions are intimately connected, but they are by no means identical. Differences in rates of wages to individual laborers do not indicate differences in the proportion of total product which constitutes wages. If, in an industry which requires 10 laborers, each receives $2.00, while in another having an equal output, 20 laborers are required, each of whom receives but $1.00, the proportion of total product which constitutes wages is the same in both.

123. A characteristic of labor that is of much importance in determining wages is the inseparability of the owner of the factor and the factor itself. Labor is inseparable from the person of the laborer; where the one is, the other must be also. The owner of situation may be in one place and his property in another. The same is true of the owner of capital and his capital. Even the possessor of enterprise is not so bound to the scene of the industry to which he contributes as is the laborer, for the former may reside in one place while his ventures are in other localities, whereas the laborer must be where he labors.

The significance of this difference between labor and the other factors lies, not in the fact that different laws regulate the returns for the factors, but in the fact that different conditions attend the operation of the law. All shares are subject to the law of value, but the conditions under which competition and monopolization operate to determine the relation of supply and demand are materially modified in the case of labor, by the fact that the person of the laborer and his labor power are inseparable. The results of this appear in various forms,[1] but they may all be summed up in the statement that this peculiarity of labor decreases the laborer's power of control in the sale of his services because it limits the alternatives at his command. He who possesses only labor-power must sell his

[1] Brentano, *Relation of Labor to the Law of To-day*, trans. by Porter Sherman, pp. 169, et seq.

services at some price or starve. The owner of capital often has the alternative of consuming his wealth in the immediate satisfaction of his wants, if the terms of a proposed exchange are not satisfactory. The owners of situation, capital and enterprise, if able-bodied men, may avail themselves also of the labor-power which their own strength and intelligence give, while he who is only a laborer controls but one of the factors of production.

When to the inseparability of the person of the laborer and his labor, is added the possibility of rapid increase in population, which is not regulated by its relation to the demand for labor but depends upon other considerations, it is evident that the conditions attending the sale of the services of labor are favorable to a high degree of competition among laborers. Indeed, to such an extent does competition affect the sale of labor that, when individual laborers are left to their own efforts, wages tend to the minimum, which, in the case of this share, may be no more than will maintain the efficiency of labor, for this often suffices to induce the laborer to make his services available. Indeed, since the laborer must either sell his services or starve, the smallest amount that will induce him to work may be below this normal minimum. It may be the bare cost of maintaining life. For, though it is true that in the long run the injuries to production through decrease in the efficiency of labor tend to prevent the permanence of such a low

wage, the fact that the immediate purchasers of the services of labor may not at once feel the disastrous effects of such a reduction, makes it possible and even probable that wages will at times go below the normal minimum. The consequences of this are serious. To impair the efficiency of the laborer is to limit the satisfaction of his wants, and this involves not only an injury to the process of production, but also an actual defeat of the economic process itself, for the interests of the laborers who suffer are the interests of society.

The possibility of excessive competition among laborers and its injurious results give to the labor problem a deserved preëminence among social problems, and emphasize the importance of a clear understanding of the principles that regulate wages as regards both the total amount of wages and the share of each laborer.

124. Wages depend, first of all, in common with the other shares, upon the amount produced, *i. e.*, upon the efficiency of production. This follows as a matter of course from the fact that the more there is produced, the more there is to divide. This does not, however, signify that the larger the product, the larger is the share that the laborer will receive, for whether the laborer gains by an increase in product depends upon whether he can so far avail himself of the influence of monopolization as to secure a portion of that increase. This requires the more emphasis in view of a belief, current among some, that if the increase in product has

been due to the application of more laborers or of more efficient labor to the process of production, the increase in product must, under normal conditions, go to the wage fund, while if the increase in product is not due to labor, it cannot affect the wage fund. This is commonly called the "residual claimant" theory of wages. It assumes that rent is determined according to the Ricardian doctrine; that interest depends upon the law of supply and demand, which must give for the services of capital a remuneration "high enough to induce those who have produced wealth to save it and store it up, in the place of consuming it immediately for the gratification of personal appetite or tastes;" and that profits are determined in the same manner as rent.[1] From these, the conclusion is drawn that rent, interest and profits are normally determined by conditions entirely independent of those that determine wages, so that these shares cannot, under the conditions assumed as normal, interfere with the laborer's share. And it is affirmed that in "so far as, by their energy in work, their economy in the use of materials, or their care in dealing with the finished product, the value of that product is increased, that increase goes to them (the laborers) by purely natural laws, provided only competition be full and free. Every invention in mechanics, every discovery in the chemical art, no matter by whom made, inures directly and immediately to their bene-

[1] Walker, *Political Economy*, p. 249.

fit, except so far as limited monopoly may be created by law for the encouragement of invention and discovery."

"Unless by their own neglect of their own interests, or through inequitable laws, or social customs having the force of law, no other party can enter to make any claim on the product of industry,[1] nor can any one of the three parties already indicated (the recipients of rent, interest, and profits) carry away anything in excess of its normal share." [2]

125. This theory cannot stand the test either of experience or of a scientific analysis of the economic process. Even according to the assumption as to the principles determining the other shares, upon which the theory rests, wages are not independent of those shares. One will not undertake the risk of cultivating land when he can secure more as a laborer.[3] Hence, when wages are low a less productive land will be cultivated than when wages are high. Instead then of rent, even according to the Ricardian doctrine, being independent of wages, an assumed wage-rate is essential to determine the starting-point of rent.

[1] Exception is made of the state and the speculator.

[2] Walker, *Political Economy*, p. 251.

[3] The satisfaction derived from the comparative independence that attends the cultivation of one's own farm and the influence of the hope of gain from the increase in value of one's property are, of course, part of the inducement to own and cultivate land, which must be considered to offset some of the return that could be secured from employment as a laborer.

Again, the rate of interest is conceived to be such as will induce men to save for the building of a fund of capital, and it is determined by the relation of the supply of capital to the demand therefor. But the character of the inducement to save and, therefore, the amount that will be saved, *i. e.*, the supply of capital, depend in part upon the opportunity for profitable investment. This is influenced by the possible profits and these, in turn, by the expenses of production, including wages.

So, also, the no-profit class, as conceived by this theory, depends, at any given time, upon the standard of wages, for men will work for wages instead of assuming the responsibility of an employer, unless the prospective reward as an employer is larger than the prospective reward as a laborer. So the standard of wages is an element in determining profits, even according to the rent theory of profits. Indeed, upon this point, the relation of wages to profits is not a matter of inference, but is explicitly set forth in the exposition of the theory. It is expressly stated that the "no-profits" employer is one whose return is so small as to be "practically equal to what he would receive if employed by others." As a matter of fact, no share is determined independently of the others, for each influences the supply of and the demand for the services of the several factors, and affects, therefore, the returns for those services.

Fundamental also to the theory that under normal conditions the laborer receives the increase in

product which results from his increased efficiency, is the assumption that "competion is full and free." When this assumption is analyzed it will be found to involve all that the theory seeks to prove. The condition of competition upon which this theory of wages rests assumes (1) that competition among employers is free to the extent that if one employer will not pay the laborer the increase in product which follows his participation in the business, another employer is at hand who will do so, and (2) that competition among laborers is such that if one laborer is not willing to work for the amount of product which follows his participation in industry, another one can be found, who will. In other words, the laborer receives the increase in product which follows his participation in a productive operation because, by hypothesis, conditions are such that he can obtain it; he receives no more than this amount, because, by hypothesis, conditions exist which prevent him from doing so.

Moreover, under the conditions assumed, that which professes to be "full and free" competition, is in fact not such. The amount received by the laborers equals what is added to product by their participation in the industry, only because the laborers are not free to compete beyond the point where they receive this amount, and because the employers also are not free to compete beyond that point. In other words, the theory prescribes very definite limits within which competition is free. Beyond these limits, it ceases to be free.

It is significant that in the theory as presented, no attempt is made to show how such a state of competiton as is assumed, can be realized. Were the analysis carried further, it would be found that the condition of competition assumed, is possible of realization only when the influence of monopolization suffices to withstand the further operation of competition, both among laborers and employers, at the point where the laborers receive the portion of product which results from their participation in the industry. Except for the counteracting influence of monopolization by the laborers, they could not withstand a decrease in wages below the amount mentioned; and, on the other hand, but for the influence of monopolization, working in the interest of the employers, the laborers could and would use the same power of control which enabled them to bring wages up to this point, to force them still higher.

126. Though at any given time, there is a certain amount of product which actually goes to constitute wages, it is not to be inferred that this is a predetermined amount, so fixed and destined to pay labor that the share of the individual laborer is bound to decrease as the number of laborers increases, or to increase as the number of laborers decreases, with the result that an increase in the share of any one laborer involves a decrease in the share of some other laborer, and *vice versa*. This view, which is essentially that of the so-called "wage fund theory," has had wide acceptance.

It finds some apparent support from the fact that the amount of wages is influenced by total product and that the rate of wages is usually determined in advance of production, and, indeed, that wages are often paid before the product is disposed of.

The theory involves the mistaken idea that, of the existing product, the amount which can constitute wages is fixed, and that wages are independent of future product. Whereas, of the existing fund of wealth, the amount that may constitute wages is variable. If the existing product more than suffices to meet the minimum limits of the several shares, it is possible that some of the excess will be paid to the laborers. Furthermore, in so far as the exigencies of the laborers do not necessitate the immediate use of their share, the amount to be paid to them may wait for future product and be influenced thereby. The prospect of large returns to an industry may and often does result in an increase of wages.

On the other hand, since the demand for labor is influenced by prospective production, while wages are usually paid after work is done, and even where an employer advances wages, he expects to reimburse himself out of product for such advances, it is sometimes held that wages depend entirely upon and are paid entirely out of future product.

Ultimately, it is true, the amount of product must at least replace that which is expended in production, or economic progress will cease, but it does

not follow that wages are paid entirely out of or depend entirely upon future product. To the extent that the laborer, during the process of production, consumes existing wealth, he receives his wages from existing product, and but for that product and the wages so paid, there would be no future product. To the extent, also, that the existing supply of commodities determines the prices of those which the laborer purchases, the amount of real wages depends upon existing product. In general, it may be said that the relation of past and future product to wages depends wholly upon the extent to which they influence the supply of and the demand for the services of labor.

127. With respect to the relation between the variations in the wages of different laborers, it is alike erroneous to say, on the one hand, that an increase or decrease in the wages of one necessarily involves an opposite movement in the wages of another; or, on the other hand, that a movement in the wages of one cannot affect the wages of another. Owners of the different factors compete with each other for a share of total product; and within each class, the members thereof compete with each other for a portion of the share which goes to that class. The former affects the total amounts which go as rent, interest, profits and wages; the latter affects the amount which accrues to each individual in a class. The total wage fund depends upon the amount of total product that labor can secure. An increase in the total wage fund which results in in-

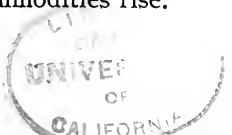
creased efficiency of labor, may so increase product as not to decrease any share. But where an increase in the wage fund is due to increased monopolization by laborers, without an accompanying increase in product, there follows a decrease in one or more of the other funds.

Again, where an increase in the wages of some laborers occurs as a result of an increase in the wage fund, no other laborer suffers a decrease. But should the wages of any increase without a corresponding increase in the wage fund, the gain to those receiving this benefit would be at the expense of fellow laborers. Any one of these alternatives is a possibility in the distribution of product.

128. As has been seen, the use of a standard unit with which to measure values in the process of exchange, introduces complications into the determination of the several shares, because of its possible effect upon prices. Variations in the value of that standard result in variations in prices, and where the prices of some commodities respond more readily to changes in the value of that standard than do others, the relative status of the members of society is disturbed. In this connection it is neccessary to recall the distinction made[1] between the nominal shares and the real shares. Nominal wages are the amount received by the laborer in the medium of exchange; while real wages depend upon the nominal return to the laborer and the purchasing power of that return. Thus, if one of two masons receives

[1] See § 101.

$5.00 a day and the other $2.50 a day, the nominal wages of the former are twice as high as those of the latter, but if the former is obliged to pay twice as much as the latter for the same grade of commodities, the real wages of the two are equal. So far as labor is concerned, an increase in the prices of general commodities is a decrease in real wages, unless accompanied by a corresponding increase in nominal wages; and a decrease in the prices of general commodities, unaccompanied by a corresponding movement in nominal wages, is an increase in real wages. To the extent that wages are matters of contract or custom they change more slowly than do the prices of general commodities, hence an increase in the prices of general commodities involves at least a temporary loss to the wage earner, and a decrease in the prices of commodities, a temporary gain. These results tend to be offset in a measure, by an increased demand for labor when prices of general commodities rise, and a decreased demand for labor when prices fall. But in the absence of combinations for mutual assistance, laborers are specially susceptible to the influence of competition, a fact that renders labor more liable to loss from an increase in the prices of general commodities than to gain from a decrease in such prices. However, the extensive organization of labor in modern industry materially lessens this tendency of the laborer to lose as a result of variations in the prices of general commodities, for it insures a more prompt increase in nominal wages when prices of general commodities rise.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